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LECTURES ON SURGERY, MEDICAL AND OPERATIVE,

DELIVERED AT

St. Bartholomew's Hospital;

BY MR. LAWRENCE.

LECTURE LXVI.

Serous Membranes continued.—Paracentesis Abdominis.—Symptoms of Fluid in the Abdomen; Operation.
Fibrous Membranes.—Fibrous Tumours.—Inflammation of Bursæ Mucosæ; Treatment.—Effusion into Bursæ Mucosæ.
Muscular System.—Laceration of Muscular Fibres.
Tendinous System.
Glandular System.—The Mammæ.—Affections of the Nipple.—Acute Inflammation and Abscess of the Breast; Causes; Treatment.—Chronic Inflammation; Treatment.—Indolent and Innocent Affections and Treatment.—Neuralgia and Treatment.—Malignant Diseases.—Simple Unnatural Growths.—Hydatids.—Unadherent Tumours.—Small Fleshy Tumours; Treatment.

Paracentesis Abdominis.—The operation, Gentlemen, of tapping the abdomen—*paracentesis abdominis*—becomes necessary in certain cases, in *ascites*, and in the disease called *ovarian dropsy*. I need hardly observe to you, that in whichever of these you have to perform this operation, it is very necessary that you should previously be satisfied of the nature of the case, and that you should be quite clear that the swelling really is produced by effusion of fluid either into the abdominal cavity, if it be a case of ascites, or into the cysts of the ovary if it be ovarian dropsy; for I apprehend you would not be very ambitious of performing an operation, which I have sometimes heard called *dry tapping*; that is, tapping the abdomen without finding any fluid. I have heard of more than one, two, or three cases of "dropsy," which have been brought to a very successful termination by the natural process of *parturition*—a mistake that has been made even by experienced persons; so long as it is really a mistake in point of *medical* treatment, that mistake would not be very serious; but when we come to the *surgical* process, that of thrusting a trocar into the abdomen, things would wear a very different aspect.

Symptoms.—The presence of fluid in the abdomen is ascertained by the particular sensation which is communicated to the hand by the fluid within, when the belly is struck on the opposite side by the other hand. If you place one hand on the abdomen, and gently tap or fillip the belly on the other side with the fingers of the other hand, you find a decided motion of the fluid against the opposite hand; a sudden stroke is communicated by the fluid, presenting an infallible indication of its existence within the cavity. If you do not perceive this particular sensation, you cannot be certain that fluid is there; or, rather, you may be sure it does not exist in that part which is subjected to the pressure of the hand. Now this sign is equally applicable to the case of fluid effused into the cavity of the abdomen, and to fluid contained in the cysts formed in the ovary. It is not enough for you to be satisfied with the presence of fluid in the abdomen, you must take care to be satisfied with regard to the particular spot in which you perform the operation; take care that the fluid extends to that particular spot, that there is as much fluid there as will enable you to plunge the trocar into the abdomen, without risk of wounding the contents.

Operation.—The situation in which the operation should be performed, is in the line above. You have merely to penetrate the integuments, the tendon formed by the aponeurosis of the abdominal muscles, and the serous membrane that lines it. There are no vessels to bleed of any consequence: the most convenient situation is in that part of the linea alba which is situated just below the navel; we may say generally, one or two inches below the umbilicus, or midway between the umbilicus and the pubis. The mode of performing the operation is with

an instrument which is called a *trocar*, from the French expression *un trois quart*; an instrument cylindrical in its shape, and brought to three sides, hence *trois quart*. It consists of the stylet, or cutting part, which makes the perforation, and the canula which fits over it, the two being quite distinct; so that when you have penetrated the integuments with the stylet, and carried the trocar into the abdomen, you can withdraw, and leave the canula in its situation for the passage of the fluid. This instrument, the stylet, consists of a cylindrical portion of steel ground to a sharp point, with three flat sides. This is the ordinary shape of the instrument. It is also ground to the form of a lancet, that is, to a flattened shape, and enters with a cut like that usually made by a lancet. This is found, however, to be more likely to divide bleeding vessels, and hence the old instrument, to which the name of trocar is generally given, is now generally employed. You introduce this instrument by holding it in the hand, and, putting the finger at the distance of about an inch from its extremity, you then carry it through the integuments—through the parietes of the abdomen as far as possible, draw the stylet back, and push the canula with the other hand into the abdomen, while you draw out the stylet with the hand by which it was introduced.

It sometimes happens that when the fluid has, in a great measure, escaped, some portion of the loose contents of the cavity falls against the end of the canula, impedes the further evacuation, and causes a good deal of inconvenience in the operation, with a considerable loss of time. Under these circumstances, you must have an extra tube; I have not got one, I see, here, long enough, nor of that kind—a tube which is not perforated at the extremity, but which has a blunt end like a female catheter, and is perforated at the sides; that tube projects beyond the end of the trocar, and fluid will escape through the perforations at its side, when the opening at the end would be filled up. It is well to be furnished with an instrument of this kind.

After allowing the whole of the fluid to escape through the canula, you apply the usual bandage to the abdomen; there is no harm, however, at all done, by leaving some portion of the fluid in the cavity of the abdomen; and when I say you should let the whole of the fluid escape, I mean that it is advisable you should do so for this reason, that if it has not all escaped after you have taken out the canula, it will continue to ooze out, and keep the patient in a very uncomfortable state. For the ease of the patient, it is necessary that the cavity of the abdomen should be completely emptied of the fluid, before you remove the canula.

As the fluid issues out, and the pressure which has so long been kept up on the diaphragm becomes diminished, the patient often experiences considerable interruption in the act of respiration. There is a sudden and very considerable change in the mode in which this function is performed; thus a sensation of faintness is experienced, and the patient very quickly falls off as in a state of syncope. The risk of this occurrence would be diminished, if, while you draw off the water, pressure be made on the upper part of the abdomen to supply the place of the water which you are removing. For this purpose, it is desirable to apply above the opening which you make with the trocar, a sheet folded of a sufficient width, to cover the abdomen from a little above the navel to the ensiform cartilage. Apply the middle of the sheet to that part of the abdomen, and let it be drawn behind by two assistants, sufficiently tight to afford comfort to the patient. If the abdomen have been completely emptied, you will place a small piece of sticking-plaster over the aperture made by the trocar, and then apply a broad roller of flannel round the abdomen with sufficient tightness to keep up the necessary pressure.

The mode of proceeding is exactly the same in ovarian dropsy, and the situation at which the tapping is performed is the same. Tapping however is but little applicable to cases of ovarian dropsy, except in the instance of a single cyst being filled. There are many cases in which ovarian dropsy consists principally of a solid fleshy growth; many in which there are a multiplicity of cysts filled with fluid, and each of very considerable magnitude. In the latter case the patient cannot derive any material alleviation of suffering from the operation; but in the case either of a single cyst, or of a very large cyst, with slight effusion into some smaller cysts, there is a very near assimilation to ascites, and then you can tap in the same situation. It may possibly happen that the dropsy is so situated, as to render it necessary to perform the operation in some other situation than that part of the linea alba which I have pointed out. There can be no objection to making the perforation in any other situation, but you must select a part in which no very considerable artery will be wounded, though, in fact, I do not know any part liable to this, but the rectus abdominis muscle; in the lower part you may come upon a branch of the epigastric, and, in the upper, upon branches of the internal mammary. Except these situations, therefore, there is none in which you may not make the perforation.

The fluid which constitutes the swelling in ascites is generally of nearly an aqueous consistence, and therefore escapes very

easily through the ordinary canula of a trocar. It is expedient, however, to use a pretty large instrument. It should not be smaller than the one I now show you, which is about the size of a large swan's quill; for the fluid takes a considerable time to flow out, even through a canula of this size. But, in ovarian dropsy, the fluid is often much thicker, it is viscid, sometimes ropy, a sort of mucilaginous fluid. In the thin fluids there are sometimes flakes, the substance of which is thicker, and there is often a considerable difficulty in drawing it away, the aid of the extra instrument which I have mentioned becoming still more necessary.

Fibrous Membranes.—Under the head of *fibrous membranes*, I have nothing to say beyond making an allusion to the subject of *Fibrous Tumours* of the dura mater, and respecting them I have very little to offer, for I never saw a case of the kind. In the fifth volume of the Memoirs of the French Royal Academy of Surgeons, there is an excellent memoir by M. Louis, which will illustrate the nature, progress, and consequence of this affection. I have nothing to say upon the subject but what you may yourselves read in books.

We find, as perhaps would hardly be expected, that when a fibrous tumour is developed on the surface of the dura mater, instead of pressing in and upon the brain, it makes its way outwards, perforates the skull, and produces a tumour of the scalp. Here is an example of the kind, and you observe the internal surface of the dura mater to be quite smooth. This is another example illustrating the tendency of these morbid growths when they occur on the outside of the dura mater. Here is a case of several growths of a medullary kind, situated on the external surface of a child's head, which is in consequence very irregular. Several of them derive their origin from the dura mater, and have thus perforated the skull. This is the opposite half of the skull-cap, taken from the head of the same patient, showing the manner in which the bones have been eaten through by the absorbents. The perforations are almost as circular and regular as if they had been made with the trephine; they show how completely the hard bony substance may be removed by the absorbents.

Inflammation of the Bursæ.—The inflammation of the *bursæ mucosæ*, where they are so situated as to be exposed to external injury, is very similar in its nature to inflammation of the synovial membrane of the joints. It is attended with an increased effusion of the fluid, which it naturally secretes, into the cavity of the inflamed bursæ. We have frequent opportunities of observing this in the bursa mucosa, which is situated between the skin and the external surface of the patella; this bursa is much exposed to accidents, as it is also to another kind of injury, also of a mechanical nature; I mean to irritation produced by kneeling on the patella, as occurs to house-maids in their various domestic occupations. Hence a swelling arises, sometimes of an active inflammatory kind, and sometimes of a more chronic description, familiarly known by the name of the *swelled knee of the house-maid*. Here is another pretty large bursa mucosa, situated between the integuments and surface of the olecranon, and this also is much exposed to external injury, although the consequent inflammation is not important; that is, it does not lead to any serious consequence.

Treatment.—The inflammatory symptoms in these cases are often very severe, and the patient experiences great pain. They require active antiphlogistic treatment, which becomes especially necessary where there has been considerable injury, such, for instance, as arises from a severe fall on the olecranon; for, in consequence of this bursa being immediately surrounded by the adipose and cellular membranes of the limb, when inflammation is excited in it, it is apt, if it be not checked, to excite inflammation of those membranes, giving rise to phlegmonous erysipelas of the whole limb.

Effusion into Bursæ.—When the inflammation of the bursæ has not been checked by active antiphlogistic treatment in its early stage, it proceeds to effusion, and we frequently find ourselves unable to relieve the patient without making an opening into the cavities of the bursæ. The sides of those cavities partake, in some measure, of a fibrous texture, so that if the inflammation have been active, and the fluid within the cavity be of a purulent character, escape is not easy, and the inflammatory symptoms run very high. Under these circumstances it is expedient to make a free opening into the bursæ, to allow the purulent fluid to be discharged; it is better, indeed, to make the opening of a very considerable size, and, in fact, in some instances, to slit open the bursæ their whole length.

After the bursa, particularly that which is situated over the patella, has been the seat of frequent inflammation, it sometimes becomes considerably thickened and enlarged; its sides are elevated, and it goes into a state in which antiphlogistic treatment has no longer any power over the complaint. In such cases of chronic enlargement, of thickening of the sides of the bursa many years old, it is sometimes necessary to dissect it away; to expose it by dividing the integuments, and to entirely remove it. There are some instances in which formations of matter have taken place, and sinuses

have remained, where we can obliterate the cavity and get rid of the thickening by freely laying open the sinous opening; but in others it becomes necessary to dissect away the whole, and I have seen indurated masses, as thick and as large as half a fist, formed over both patellæ in cases of this kind.

Muscular System.

Laceration of Muscular Fibres.—It sometimes happens, that the *muscular fibres* are lacerated in consequence of external violence; I have seen an instance of this in the dead body. The *rectus abdominis* was nearly torn across; and I think there can be no doubt, that in a variety of injuries done to the limbs, muscular fibres are more or less lacerated, though in cases which do not terminate fatally we have not the opportunity of ascertaining the fact. No doubt this is one of the causes of the pain and inability to use the limb often experienced after accidents to the extremities.

Tendinous System.

Tendons—are also liable to accidents from injury, more particularly where they are large, as in the case of the tendo-achillis, which may be injured by over-exertion of the large muscles attached to it; in fact, it may be torn across, producing the case which is called *rupture of the tendo-achillis*. The nature of the accident may be rendered apparent by the fissure—the interruption of the continuity of the tendon—that is produced between the two extremities, and into which you can introduce one or two fingers.

The tendon when thus ruptured will grow together again. The limb must be kept at rest; it must be half bent, in order to relax the gastrocnemius, in which position the knee should be kept for about the same length of time that is necessary to produce the consolidation of a broken bone. This rest is not absolutely necessary, for there are instances of persons who have experienced the rupture of the tendo-achillis and who have not confined themselves at all; they have used a high-heeled shoe instead; but of course they would abstain from attempting to raise the foot; the muscles, indeed, could not perform their functions when the tendon was thus divided.

Glandular System.

The Mamma.—I proceed next to speak of diseases of glandular organs, and I may, in the first place, treat of the diseases of the *female breast*, the diseases of the breast being principally seen in the female subject. It is true that males are also possessed of a breast, but in them it is not turned to any useful purpose, so it seems not to undergo any disease, which is but fair. One hardly knows whether the male breast is merely created for ornament, or whether it is formed to keep up the general similarity in point of form between the two sexes; it is, however, very rarely the subject of any kind of morbid affection.

Affections of the Nipple.—In suckling women, inconvenience is very often experienced from a *sore state of the nipples*, which become excoriated, chapped, or ulcerated. Cases of this kind fall, perhaps, more under the care of accoucheurs than surgeons. I do not know, therefore, that I have much to say to you respecting the affection. It appears to me, that where unctuous substances, which we naturally have recourse to, are applied, some very simple thing is the best; simple cerate, or a soft, mild ointment. But where the nipple has been very bad, I have, in some cases, found relief from touching the sore with nitrate of silver, which, indeed, has answered better than any thing else. Let the nipple be dry, free from all moisture, and then apply the nitrate. Of course you do not suffer the child to be put to the breast again for four-and-twenty, or twelve hours, at the least. The application may be repeated once in two or three days.

Acute Inflammation and Abscess.—The female breast, during the period of suckling, is often affected with acute inflammation, which proceeds to suppuration, to the formation of *phlegmonous abscess*. This, which is merely acute inflammation in the breast, is called, in consequence of the particular period at which it takes place, *milk abscess*, and when it breaks externally, the case, in common language, is termed a *broken breast*.

The phenomena of inflammation, when occurring in the breast, are so exactly similar to those which have been detailed under the general description of inflammation, that I need not repeat them; I would only say, respecting the—

Causes—of this affection, that they seem referable partly to the vascular activity of the breast, an activity which is attendant on the secretion of milk, partly to the mechanical irritation to which the breast is then liable, to sources of pressure, and, lastly, in suckling women, when the milk does not come freely, to attempts made by the mother or nurse to promote its flow. These causes, on many occasions, act with peculiar force, because the suckling woman is kept, from the warmth of her apartment and clothing, her stimulating diet, and so on, in a state which predisposes her to inflammation and consequent suppuration. I do not find that the nurses and attendants whom we usually meet in lying-in rooms, at all admire the antiphlogistic plan; they seem to me to think that a great quantity

of good things should be taken; that the system should be "supported" with plenty of meat and drink; they are, accordingly, very apt to supply lying-in ladies with porter, wine, spirits, and the various other good things of this world, in which they themselves delight. Thus it happens that a feverish state is produced, and we cannot wonder, therefore, that serious local inflammation should attack the breast, and go on as I have stated.

This active inflammation may affect either the whole or only a part of the breast. Sometimes it is situated near the external surface, and sometimes it occupies the centre of the gland, and sometimes even it seems to be situated on the surface which is towards the parietes of the chest.

Treatment.—If we see a case of inflammation of the breast in its very early stage, where pain is experienced in the part, where there is a sensation of heat to the touch, and where the patient finds the breast hot, without its having become hard or undergone inflammatory induration, and without its being much swelled, and where the secretion of milk still subsists,—if, as I observed, we see the case when these symptoms are present, we may put a stop to the inflammation and prevent suppuration, by adopting an active antiphlogistic treatment, that is, by freely applying leeches to the breast, by using evaporating lotions, by purging, and also by preventing the child from being put to the breast. You certainly can do no good while you allow the suckling to go on, for that would be permitting a source of irritation which is calculated to continue and aggravate the inflammation. The removal of the child from the breast, therefore, is an essential part of the treatment, at whatever period that is undertaken. If the antiphlogistic treatment do not succeed in arresting and reducing the inflammation, it will at least diminish the extent of the suppuration; it will lessen the quantity of matter and the size of the abscess.

When matter has formed, it becomes a question whether it is better to allow its gradual approach to the surface or to attempt relief by an opening. I should observe, that when we perceive matter has formed, or is likely to form, the cold applications should be discontinued, and that the patient will derive more comfort from fomentations and a soft poultice. If the suppuration of the breast be partial, if it occupy a small portion of the gland, and if it be situated near the external surface, I believe the best practice is to leave the case to its natural progress, to allow the matter to find its own way to the surface and be discharged by bursting; but if the whole gland be inflamed, if the matter occupy the centre, if we have reason to suppose it to be situated beneath the gland, or between the under surface of the gland and parietes of the chest, we can considerably accelerate the period of relief by making a free external opening; we can procure ease for the patient, we can liberate her from the very severe local suffering, and reduce the high degree of excitement which attends this affection 24 or 48 hours earlier than relief would occur by the natural process; and perhaps we can limit the extent of the mischief which will ensue, for the texture of the breast is so loose, there is such an abundance of cellular and adipose matter about it naturally, that a very considerable quantity of matter may collect before reaching the surface. It does not make its way externally so directly and rapidly as when formed in many other situations; still I think it will be of no advantage to make an opening if you have much thickness of parts to cut through. You would not think, even in such a case as I have mentioned, of making an opening unless the skin was becoming so thin that you could feel the matter pretty distinctly; but when that was the case you would make a tolerably free aperture, and allow the matter to escape.

Chronic Inflammation of the Breast.—The breast is liable to *chronic inflammation* and to *chronic abscess*, which may be of the scrofulous kind; that is, they may occur in individuals who present marks of a scrofulous constitution, and both the characters of the disease itself, and the nature of the pus that is formed, may be assimilated to those which we see in scrofulous abscesses situated elsewhere. The breast is not very liable to scrofulous inflammation, and cases of this kind, therefore, are not common.

Treatment.—In its treatment we should adopt such local means as are suited to the symptoms; mild antiphlogistic measures may be necessary; a few leeches, poultices, and so forth. We sometimes find in these cases, that after the matter has been discharged by an external aperture, the opening remains fistulous, while fresh formations of matter commence, make their way to the surface, and also end in fistulous openings. Thus several apertures may be formed on the surface of the breast, each leading to a fistulous aperture which runs through the substance of the organ. The general treatment, however, is of more consequence in these cases than the local, and where the affection is of a scrofulous kind, we should adopt those constitutional means of relief which I have already pointed out in speaking of scrofula. It will be found, in most instances of chronic disease in the breast, whether of a scrofulous or other description, that the functions of the uterus are

not rightly carried on; for if, indeed, they be naturally performed, the breast will seldom become the subject of disease. There is a close connexion between the two; the breast is, in a great measure, subservient to the uterus, and we find that if the latter remain healthy the breast will generally be healthy also. We ought, therefore, carefully to inquire into the uterine condition, and adopt means for correcting that condition when it is unhealthy. Aloetic and chalybeate medicines are particularly proper in these cases.

Indolent and innocent Affections.—In many instances the substance of the female breast undergoes a slow kind of induration and condensation, unconnected with any very essential change of structure. On feeling the part you find a species of lobulated tumour, which seems as if it were a part of the natural structure of the mammary gland, differing only in the circumstances of its being much firmer and harder. This change may affect either a part only, or it may the entire substance of the gland. We find it sometimes in both breasts at once. I have seen this affection produce retraction of the nipple to a considerable extent, an effect which, ordinarily, is considered to be characteristic of a scirrhous affection. It is not, however, to be regarded exclusively as an indication of scirrhus, for it may take place under the circumstances I am now describing.

This chronic condensation of the substance of the breast takes place more particularly in females who have arrived at a certain age, and are single. It is observed to occur in unmarried women, perhaps from the age of twenty-five to forty years; it comes on slowly, and almost insensibly. Frequently when our opinion is asked respecting a case of this kind, we are informed, that the patient has known that the lump of which she speaks has existed for some years. Not long ago I saw a case of this kind, where, on investigating the circumstances attending the affection, the lady informed me that she had been, in some degree, aware of the existence of the tumour for seven or eight years; and at the time I saw her, this kind of lobulated hardness occupied nearly the entire mammary gland of one side, and existed in one portion of the gland on the opposite side. In the gland which had first been the seat of disease, the integuments were drawn in at one point, as is observed in cancer, and there was a partial retraction of the nipple. In this case the exhibition of steel medicine, a good diet, attention to exercise, and so forth, which are the means best calculated to invigorate the system, and more especially to act on the uterus, brought the thing into a quiet state. They did not, however, remove the tumour, for the gland remains indurated as before.

Neuralgia.—The mammary gland is sometimes the seat of painful sensations without any visible alteration in the structure, an affection which probably may be called *neuralgia of the female breast.* Perhaps the gland may appear to be a little larger than natural, but there is no external redness, no hardness of the substance, and if we were merely to trust to the evidence of the touch, we should say that no disease existed; but the patient is sometimes subject to very severe pain, pain so severe, indeed, as to prevent her from making any exertions which affect the breast, or from using the arm on the affected side, and really altogether such as to affect the system very considerably. Like other neuralgic pains, these are not constant; they are experienced more particularly at certain times, and more severely previous to the monthly periods, while sometimes the patient is comparatively free from them.

Treatment.—Now, it is more easy to say what will *not* do good in these cases, than to point out remedies that will remove the pains. This affection (which, by the way, Sir Astley Cooper has called the *irritable breast*) cannot be cured by antiphlogistic treatment. It is in vain to try leeches, to purge, and to use other means of a similar tendency,—they will not do. Perhaps the exhibition of steel medicines may do good, but there are instances in which they also fail. Then the narcotic plan has been tried, conium, hyoscyamus, and, more particularly, the belladonna plaster, on which some persons place considerable reliance in neuralgic affections, but from which I cannot say that I have ever seen any great benefit derived. Mr. Teale regards these neuralgic affections as depending on something wrong in the spinal chord; it may be as well, therefore, for you to direct your attention to this point in such cases as these.

Malignant Diseases.—The female breast is liable, as I have already said, to change of structure of a *malignant* character, to *cancer*, and to *fungus hæmatodes*; more particularly to the former, to which I have no occasion again to advert. I must observe, however, that the female breast is also liable to affections which are not malignant, but which resemble the malignant both in the change of structure, and in certain stages of their progress. In consequence of this resemblance, it becomes very important that you should pay close attention to the circumstances attending disease of this part, that you may be enabled to distinguish between those diseases which are, and those which are not, malignant, and that you may adopt the proper treatment in either case; for I need not observe, that the remedies are

very opposite. It is important that you should not mistake between them, for the treatment is materially different. These cases are generally known to the family, too, and the consequence of any misapprehension as to the nature of the disease and the mode of cure, would be very prejudicial to the interests and character of the medical practitioner. I may also observe to you, that it is of very great importance *to the patient*, that right opinions should be formed. In some cases an operation may be required, and not performed, or an operation may be performed unnecessarily.

Simple unnatural Growths.—The breast is liable to enlargement from a kind of *simple growth*—simple vascular excitement—augmentation in bulk of the natural structure of the part, with more or less of condensation. Sometime ago I had occasion to remove a very large tumour of this kind from the breast of a female, in whom the growth was of about two years' standing, not more. She was a woman who had naturally very voluminous breasts, and in one of these immense masses (for they were quite immoderate in point of size), swelling took place towards the centre, not marked by any peculiar character. I saw the patient at the beginning, and recommended leeches and means of that kind. She lived in a remote part of England, and having attended her at the onset, and given her some general directions about it, I did not see her again for a long time. After the lapse of a year, or rather more, she came again to consult me, and she then had the most enormous tumour in the breast I almost ever saw; larger than my head. It was tolerably firm, and did not appear to the touch to contain any fluid. The skin was of course tense. The tumour itself was easily moveable on the side of the chest—a circumstance which, in the advanced stage, is important, as generally indicating the innocent nature of the affection, or at least as negativing a supposition of the fungoid or cancerous nature of the swelling, which at the later period becomes fixed to the side. There was no pain in this case. The patient had been delivered of a child since the time at which I had seen her, and she had suckled the child with the diseased breast. This was now of so formidable an appearance in point of magnitude, that the practitioners under whose observation it came in the remote part of England in which she resided, represented to her very plainly, that it must be the end of her, that there was no cure for it. She did not much like the necessity of making up her mind to die from it, and she intimated, therefore, that she should like to come to town to consult me about it; the more so, as it happened that I had had a child of hers, I believe, under my care, with a double hair-lip, on which I operated, and which did remarkably well. They laughed heartily at the idea of her coming to town. They said she could not possibly undergo with safety the fatigue of the journey: she was much weakened, and had had leeches applied to the breast; and they said, that if she did at last make the journey, most likely the London surgeons would perform some desperate operation, under which she would die. However, she felt herself getting worse and worse, and she made up her mind, that if she died on the road, she would attempt the journey; and accordingly the medical gentlemen in the country dismissed her with this consolatory remark, that she had better bespeak her coffin than go to London; that she had better die at home than go and perish under the knife in town. Well, she came, and certainly the tumour was larger than my head. Upon reviewing her state, however, I deemed her to be a person of good constitution, and of a favourable age (about thirty-six years); the swelling was quite moveable, and supplied with considerable vessels. Thinking the removal would not occupy a very long time, I suggested the propriety of excision, and she consented. Accordingly I did remove it, and the case did very well. Upon subsequently cutting through this breast, it seemed to consist merely of an immense enlargement of the natural structure, without the formation of any adventitious structure of any kind. So much of the natural structure remained, that on cutting through it, an immense quantity of milk and creamy fluid, many ounces in amount, flowed out from apparently enlarged lactiferous tubes. We could distinctly see those large lactiferous tubes divided. Such was the nature of this tumour.

Hydatids.—There is a simple vascular enlargement of the breast, which often proceeds to a very great magnitude, throughout which there are cells or cysts dispersed; this is called by Sir Astley Cooper, in his diseases of the breast, the *hydatid tumour* of the breast, a name which I do not think very well chosen; for, by *hydatid*, we generally mean a detached growth, which in many instances is clearly and decidedly an animal; at all events it is a something contained in a cell not adherent. Now the cysts that are found in these breasts are merely excavations—cysts like those that are found in the ovary, and not detached bags. Moreover, the cysts do not seem to me to form the essential part of the disease, for they are trifling, few, small in amount, and contained in the general bulk of the swelling, which consists of a vascular enlargement of the breast. This is the kind of case, I suppose, which is called by Mr. Abernethy *cystic sarcoma*. You may have many such tumours existing together, or

even a single cell or cyst may form in a mammary gland, of which there are instances. Here is an example of the kind; there is a simple cyst, a simple smooth bag, about the size of an egg. It may happen that some of those cysts may enlarge, come near to the surface, present a feeling of fluctuation, and induce you to puncture them, and then the clear watery fluid will point out what the nature of the affection is. There are instances of a simple cyst, where the fluid has been let out by a puncture, where some degree of inflammation has occurred, and where the cyst has been consolidated. But where the cyst is larger and seems to increase, we have no means of stopping its progress or removing the affection, except by the removal of the part. This, like the case I have just mentioned, is an *unadherent tumour*; it is loose, and lies upon the pectoral muscle. There is no affection of the gland in this case, and the health of the female does not suffer materially.

Small Fleshy Tumours.—The female breast is often the seat of small fleshy tumours, seldom exceeding the bulk of an egg, which are somewhat analogous in structure to that of the breast itself in which they form; but, in the proper sense of the term, they are new depositions, new growths, new tumours, generally of a firm feel, loose in their situation; that is, connected by loose cellular texture to the surrounding parts of the breast, and very commonly about the size of a hazel nut, at all events hardly ever going beyond the size of an egg. They are apt to be painful; they occasion uneasiness, and are tolerably firm to the feel.

Treatment.—We have no means of lessening, or checking, the growth of these tumours, and I think it advisable, therefore, to remove them. It is only necessary, under such circumstances, to remove the growth itself; you do not want to remove any part of the gland. When you cut into them, you find that they are hard and lobulated on the external surface, and tolerably vascular.

Sir Astley Cooper mentions the formation of little hard knots in the breast, under the name of *irritable tumour* of the breast. I do not recollect having seen any case exactly corresponding to his description, which illustrates the kind of growth I have had occasion to mention under the head of *painful subcutaneous tumour*—a small painful tumour. If such a thing takes place in the breast, you must, of course, remove it.

Now these are the principal affections of the breast. I cannot pretend to say that they include all varieties of enlargement, of affections with which you may meet; for it is difficult to comprehend all sorts of growths of this kind under any description; indeed we cannot, by lectures or description of any kind, teach all that is to be known in medicine and surgery. We can only lay down such general principles as will enable you to apply your own observations.

Certainly, in discriminating these affections, the most important thing is to decide between the malignant and the innocent, and, more especially, between that which is, and that which is not, cancerous. In this respect, one great point to assist you, is the age of the individual affected. Cancerous affections of the breast are very rarely found before the age of thirty. They do not usually commence before forty, nor often afterwards. Most of the various other affections, however, may occur previous to these periods of life. The looseness of the innocent tumours, their want of adherence to the skin, their non-adherence, or only loose connexion to the mammary gland, their non-adherence to the chest on which they are formed, their non-contamination of the glands of the axilla, and the absence of all material interference with the health of the patient,—these are circumstances that will enable you to form your judgment. I have sometimes heard the diseases of the breast and testicle dismissed in a very summary way, as thus:—"The disease is either innocent, or malignant; if it be malignant, you will do no good by operating; if innocent, it will get well without your doing any thing to it." Now I cannot include all I have to say within that short statement. In the first place, I cannot say, that if the disease be malignant you will do no good by operating,—because, in the very early stage of the disease, I believe you may do good by it; you may either remove the disease entirely, or check its progress for many years; you may, therefore, do good in malignant cases. In the next place I cannot agree to say, that if it be innocent the disease will get well without any thing being done; for there are many cases which will *not* get well, in which the tumour grows to a great bulk, is attended with great pain, and, at all events, is a source of great anxiety to the mind of the patient and her friends, who are particularly haunted with the fear of cancer, whenever any disease takes place in the breast. If, therefore, we can entirely remove the thing, we have at all events the advantage of setting the minds of the parties at rest—an object which it is no inconsiderable benefit to accomplish.

ON THE DETECTION OF

IODINE,

AND THE

HYDRIODATE OF POTASH,

In Animal and Mineral Admixture.

By W. B. O'Shaughnessy, M.D., *Surgeon, &c.*

IODINE.

Although no case has hitherto been put upon record in which chemical evidence was required of poisoning by iodine or the hydriodate of potash, yet from the rapidly-increasing and general knowledge of their powers, and the virulent action they are capable of exerting, the subjoined observations may not eventually prove destitute of practical utility, especially since, in the latest publication on toxicology in existence, no directions at all are given for the detection of iodine, and the subject of hydriodate of potash is dismissed, in a manner which seems to me to admit of some qualification and much improvement. To remedy these deficiencies is my object in the ensuing remarks. I shall therefore consider,

First; The chemical properties of iodine as far as concerns their application to toxicological analysis.

Secondly; The difficulties which may present themselves to the exhibition of these properties, or tests, when the iodine is to be sought for in complex admixture; and,

Thirdly; The method by which these difficulties may be obviated.

1st. The physical or external characters of iodine are too well known to need description here; the chemical properties are peculiar and uncommon. Though when exposed to the open air at natural temperatures iodine undergoes slow and invisible evaporation, yet, if heat be suddenly applied in close vessels, it rapidly sublimes in rich violet vapours, and condenses in various forms, according to the quantity of materials, and the size of the apparatus that may be employed. Iodine is extremely soluble in alcohol, which it colours to an intense brown. It is also soluble, though with extreme difficulty, in water, being only capable of uniting with that fluid in the proportion of *one* to 7000 parts, and from this solution, when heated to the boiling point, the peculiar vapours of the iodine are disengaged. With the metals it unites in various proportions, producing coloured combinations, and from such of these iodides as are formed with the metals fixed at a red heat, the iodine is readily separated by raising their temperature to that point. With hydrogen it unites by a very powerful affinity, and gives rise to the formation of hydriodic acid; so energetic is this attraction, that it enables iodine to decompose many substances which contain that element, such as the hydro. chlorie, or muriatic acid, sulphuretted hydrogen, water, and many others. But of all the properties of iodine, its action upon starch is the most extraordinary and characteristic, producing a compound of an intensely blue colour, entirely insoluble in alcohol, but imperfectly in water, losing its colour when heated to the boiling point, and again regaining it if the fluid be *suddenly* cooled.

2dly. Of these properties, next to the exhibition of iodine itself, the action of starch affords the best evidence by which it can be distinguished; it acts in the proportion of one to 450,000, and on the blue fluid thus procured, the effects of alternate boiling and cooling may be perfectly exhibited; but amply and infinitely delicate as this indication is, yet when iodine is taken into the stomach, certain changes and actions frequently occur, which render its toxicological application often difficult, sometimes entirely impracticable. In the first place, it is liable (and apparently from the operation of many causes) to be rapidly converted into the hydriodic acid, and in this condition to be perfectly removed into the circulation and eliminated by the kidneys, salivary and cutaneous excretions, and in all probability, by the pulmonary exhalation also. This fact, as far as regards its excretion by the kidneys, has been perfectly established by the experiments instituted on diuretics by Drs. Wohlen and Stehberger; with respect to the actions which give rise to it, some speculations will be advanced, when the effects of amylaceous matter on iodine, in the intestinal canal, have been taken into consideration.

The second source of difficulty arises from the ready formation, in the alimentary canal, of a compound, consisting of iodine and albumen, totally insoluble in alcohol, and nearly so in water. As far as I am aware this compound has not yet attracted the attention of chemists; its nature, however, is susceptible of ready demonstration by adding the tincture of iodine to diluted white of egg or milk, or allowing solid iodine to remain in contact with the latter for some hours, when a yellow, pulverulent compound will be formed, which by exposure to a stream of sulphuretted hydrogen, is converted into hydriodic acid and concrete albumen.

The third obstacle to the detection of iodine is, the rapidity with which it unites with starch in every form in which it may present itself to it in the stomach or intestines. Such amylaceous matters may be present, perhaps administered as antidotes,

but more usually in the form of different articles of diet, such as bread, potatoes, &c. I have found that the watery solution of iodine, and even the tincture itself, may be totally deprived of its iodine by standing over bread or potatoes, the blue iodide of starch being formed. Did this blue colour remain permanent in the contents of the stomach, as many have supposed it does, a test of the action of iodine would to a certain extent be afforded, but I have also found in dogs to whom iodine has been administered after a meal of potatoes (the œsophagus being subsequently tied), that when killed after the lapse of an hour or two, no traces of blue were perceptible, while on the contrary, the contents of the intestinal canal exhibited a reddish appearance. Further, these matters, when treated with fresh quantities of starch, gave no blue tint till nitric acid was added, when the whole mass instantly assumed an intense purple colour. Such were the results of three out of four experiments made with the iodine in tincture. Of two trials with the iodine in substance, *cæteris paribus*, one gave the blue colour on trituration with starch, the other did not. The supposed causes of this change of colour, I have preferred to allude to in the foot note, as they are, in some measure, hypothetical, and I am unwilling to encroach upon the *practical* bearings of the subject under consideration, by the advancement of any speculations which may admit of a difference of opinion. * Finally, another cause of difficulty exists, in the mechanical revolution of particles of iodine in the mucous fluids, on which it exerts no decomposing action, but which tend to prevent its solution in alcohol or water.

It will thus be perceived that several causes may operate in impeding the application of the starch test, infinitely delicate though it be, when these circumstances are not in operation. Besides, all these difficulties will be increased by the direct ratio of the time elapsing between the administration of the poison and the death of the patient; in fact, I feel convinced that in a vast majority of any fatal cases which may occur, no *free iodine* can be detected in the *fluid* contents of the stomach or intestines, neither can it be removed from them by water or alcohol. I believe, also, that the starch will very seldom, perhaps never, be *directly* applicable to the examination of the intestinal *fluids*, unless where, after the administration of the tincture in very large quantities, the vomited matters become the subject of analysis. A method of proceeding applicable to these difficult cases, becomes, therefore, absolutely necessary, and the following I can strongly and confidently recommend, as founded on the best known chemical properties of iodine, liable to no fallacy, and susceptible of the utmost delicacy in the indications it affords.

3dly. A trial test for free iodine should be always premised by the addition of a part of the suspected fluids to a solution of cold starch, when, if iodine be present, the blue colour will be struck, and the remainder of the fluid may be reserved for subsequent examination. Should this test afford no indications, the subsequent process may then be proceeded with. It is divisible into two parts, one applicable to the fluids, the second to the solid contents of the alimentary canal.

The first is extremely simple, and depends on the fact, that though *free* iodine be not immediately detected by starch in the fluids under examination, yet that *hydriodic acid* may nevertheless exist in them. A little of the fluid, therefore, after filtration, should be mixed with starch as before, and *a few drops of sulphuric acid be then added*,* when the blue tint will be struck, if an appreciable quantity of hydriodic acid be present. Should the test operate, the remaining fluid is to be reserved; if it do not,

* The discoloration of the blue iodide of starch in the intestinal canal, appears to me to depend on the formation of hydriodic acid, which possesses no colouring effect on amylaceous matter. This conversion may depend on various causes, of which, I believe the action of free muriatic acid and sulphuretted hydrogen to be the principal, assisted materially by the degree of heat necessarily existing through the abdominal viscera. Both these acids decolorise the iodide of starch, out of the body, and in both cases the colour may be again restored by the addition of nitric or sulphuric acids, which I conceive to operate by imparting oxygen to the hydrogen of the hydriodic acid, and consequently setting iodine free. Again; that both muriatic acid and sulphuretted hydrogen may be present in the alimentary canal, I consider sufficiently proved by the researches of Dr. Prout, in the first instance, and by the ordinary chemical properties of intestinal flatus in the other. That hydriodic acid also is formed by boiling the iodide of starch, there is, I conceive, much reason to suspect, although no certain proof of the fact has yet been afforded; one strong circumstance at any rate is, that the iodide of starch decolorised by boiling, again becomes blue, on the addition of nitric acid, which is precisely what occurs when hydriodic acid mixed with starch is similarly treated.

* The sulphuric acid is used here in preference to the nitric acid, because the latter causes a dark-green colour in any fluid containing bile, which can scarcely be distinguished from the blue of the iodide of starch.

it is no longer of any value, and our attention is next required to the solid substances remaining after the separation of the fluids by filtration.

These solid contents will usually consist of fibrin, casein, albumen, and starch—iodides of albumen and starch? Iodine mechanically involved in animal mucus? with other substances of less importance. To this mass a little cold starch paste should first be added, the entire should then be triturated together in a stone or glass mortar, next diffused through water, and, finally, a free current of sulphuretted hydrogen gas passed through the mixture for at least half an hour. By this process, any free iodine present will be first converted into the iodide of starch (if the quantity be considerable, the blue colour may be struck at this part of the process; for reasons, however, to be noticed in the sequel, this should not be considered sufficient), and by passing the sulphuretted hydrogen through the mixture, the iodides of albumen and starch will be converted into hydriodic acid. The fluid should now be filtered, and subsequently brought to the boiling point, in order to expel any excess of sulphuretted hydrogen. Finally, when cool, a small quantity of it should be treated with starch and sulphuric acid, and the remainder reserved for the second branch of the process, the object of which is to procure the iodine itself in its simple condition.

If any urine can be obtained, a small quantity of it is to be acted upon as directed in the case of the fluids of the stomach, and the remainder in like manner reserved. The serum of the blood should also be coagulated by boiling, the coagulum washed with water, and the fluid subjected to the same manipulation. The pericardial liquor is also to be similarly treated.

I shall proceed to the consideration of the hydriodate of potash, before I mention the ultimate process by which the iodine itself may be procured from these different fluids, which have already been found to answer to the starch as a trial test, since the same proceeding applies to the hydriodate also. Before I enter on this division of my subject, however, I may be allowed to observe, that I by no means insist on the necessity of searching for the iodine itself, after the colouring of starch has indicated its presence; on the contrary, as far as chemistry touches us at present, the ulterior search is completely unnecessary; yet no matter how peculiar or striking *a property* of any substance may be, it is at the same time a logical and self-evident truth, that the substance itself affords in the aggregate of all its properties, evidence of a still more decisive and convincing nature. Under this impression, and feeling that every zealous toxicologist must be anxious to obtain as perfect demonstration of the substance he investigates as his science is capable of affording him, I have not hesitated to seek for the best method by which iodine can be exhibited in its simple form, and this method will be found at the conclusion of the paper.

HYDRIODATE OF POTASH.

This important substance I propose to consider under the following heads:—

First; Its mode of preparation, and such of its chemical properties as are concerned in its toxicological relations.

Secondly; The tests recommended by the most eminent authorities for its detection in complex admixture.

Thirdly; The objections to the processes thus recommended, and

Fourthly; The method by which I propose to remedy these objections.

1st. The mode of preparing the hydriodate of potash adopted by the Dublin College, consists in the formation of hydriodic acid, in the first place, by passing a current of sulphuretted hydrogen gas through iodine suspended in water, and subsequently neutralizing the acid thus obtained by the carbonate of potash. It may also be prepared as Dr. Turner directs, by dissolving iodine in a hot solution of caustic potash, when water is decomposed, giving rise to the formation of iodic acid (iodine 1, oxygen 5), and hydriodic acid (iodine 1, hydrogen 1), and finally converting the iodic acid into hydriodic, by a current of sulphuretted hydrogen. As procured by either of these methods, the salt, when pure, is susceptible of perfect cubic crystallisation; it should have well-defined edges, be of a translucent, though rather milky colour, and be perfectly free from yellow stains. In this condition it is possessed of powerful medicinal activity, and is characterised by remarkable chemical peculiarities; it is extremely soluble in water,* and also in alcohol to a certain extent; in solution it is perfectly colourless and transparent, and exerts no action whatever upon starch; but if any substance capable of abstracting hydrogen be

* In most chemical works it is stated to be deliquescent; an assertion which, I believe, is not correct, as far as regards *pure* hydriodate of potash; at any rate, at the moment I write, a crystal of the hydriodate continues perfectly dry, after exposure to the air in a large apartment for seventeen days, on fourteen of which rain fell in great abundance. Some specimens, however, of what is called hydriodate of potash, will certainly deliquesce quickly enough, but simply on account of the carbonate of potash they contain.

brought in contact with it, such as nitric or sulphuric acid or chlorine, its colour becomes brown from the evolution of free iodine corresponding to the quantity of hydrogen it has lost, and the solution consequently acquires the power of forming the blue compound with starch.

With a solution of the chloride of platinum, hydriodate of potash causes a dark-brown precipitate; or, if the quantity be excessively minute, an intense port-wine colour, resulting in both cases from the formation of the iodide of platinum. With solutions of lead, such as the common acetate, nitrate, &c. it causes a canary-yellow precipitate, the iodide of lead; with the proto-salts of mercury, it forms the yellow proto-iodide; and with the per-salts, the carmine red per-iodide of mercury. In all these cases the action is simple, but requires to be remembered; it may be exemplified in the action which takes place when the acetate of lead is added to the hydriodate of potash; acetate of potash is first formed, and then the hydriodic acid reacts on the oxyde of lead, the hydrogen of the former unites with the oxygen of the latter, producing water, while the simple iodine and the metal combine, and are precipitated as the yellow iodide of lead. Such are the properties of the hydriodate of potash, as far as relates to toxicological analysis. I have now to refer to the methods founded on these properties, by which the most recent writers propose to accomplish its detection in complicated mixtures.

2dly. In the 10th volume of the *Annales de Chimie*, a paper will be found by M. Devergie, in which the physiological and chemical relations of the hydriodate of potash are examined with reference to their toxicological bearings. In this composition much ability is doubtless displayed, and the author acquits himself with considerable credit on the several points he investigates; but, at the same time, he has, in the chemical details, omitted every notice of the most characteristic of all its properties, namely, the dye it is capable of imparting to starch under particular manipulation; he has also brought forward much matter of comparatively total unimportance. Further, an abbreviation of M. Devergie's observations constitutes the notice given by Dr. Christison of this subject in his recent publication. As this distinguished author supports the statements of the French toxicologist by the sanction of his entire approval, I shall take the liberty of quoting from Dr. Christison's work the passage to which I allude.

"In solution, the best tests of the hydriodate of potash are, sulphuric acid, corrosive sublimate, acetate of lead, and proto-nitrate of mercury. Sulphuric acid disengages the iodine, forming an orange-coloured solution; corrosive sublimate forms a fine carmine-red precipitate, the iodide of mercury. Acetate of lead forms a fine yellow precipitate, the iodide of lead. Proto-nitrate of mercury throws down a yellow precipitate, the iodide of mercury. (By a misprint, this precipitate is termed 'carmine red' in Dr. Christison's text.) The corrosive sublimate is delicate enough to detect the hydriodate in 2000 parts of water, the sulphuric acid in 10,000 parts, acetate of lead in 18,000, and the nitrate of mercury in 60,000. Few of the ordinary organic fluids alter the action of the tests, unless they are much coloured. In that case, the best plan is to evaporate to dryness, and clear the residue by raising the the heat. The salt is not decomposed, and may be dissolved out by pure water, after which it may be subjected to its usual tests." In Devergie's paper, the solution of the chloride of platinum is also mentioned as a test for the hydriodate of potash: this Dr. Christison has altogether omitted.

3dly. I shall now, in the fewest words the subject can be expressed in, sum up the objections to which this mode of examination appears to me to be exposed. In the first place, even in a *pure* solution of *pure* hydriodate of potash, the sulphuric acid as a direct test is truly insignificant, and I pass it by the more briefly, as I have some reason to know that Dr. Christison himself does not now place much reliance either on its delicacy or decision. The next test, namely, the acetate of lead, is *individually* liable to the objection, that the chromate of potash produces the same effect. The per-muriate of mercury is also liable to this source of fallacy, that alkaline carbonates throw down a red precipitate, differing only in shade from the true precipitates with the hydriodate of potash. (As to the proto-nitrate, the water of this city, though remarkable for its purity, causes with it a yellow precipitate identical in appearance with the yellow proto-iodide of mercury.) In fine, of all the tests proposed by Devergie, the only one individually free from fallacy is the muriate of platinum,* which Dr. Christison omits, and the one which (according to the testimony of Dr. D. B. Reid in his Practical Chemistry, and corroborated by many other eminent observers) is infinitely the most delicate of all the metallic reagents. But further, whether in delicacy, simplicity, or facility of manipulation, all these tests yield to the indication afforded by starch, which, as before stated, suffers no change of colour in solutions of hydriodate, but be-

* Before adding the platinum test to urine, it should be acidulated with acetic acid, because the iodide of platinum is soluble in alkalies, especially in ammonia, to a considerable extent.

comes immedintely blue, whenever the iodine is set free: thus, if starch be diffused through a suspected fluid, and still remain white, but immediately turn blue on the addition of sulphuric acid, the proof of the presence of hydriodic acid amounts to positive certainty, and requires no further corroboration. It acts also in the next to the infinite proportion of 1 to 200,000 parts. It is, to say the least of it, extremely strange, that such a simple, and almost palpable, test, should have been altogether overlooked by Devergie and Dr. Christison.

But all these objections to the metallic tests (except the muriate of platinum) become multiplied without end, when we consider them as applied to the adulterated salt, generally sold under the appellation of the hydriodate of potash. Of twenty-four specimens now in my possession, obtained indiscriminately from the leading establishments in this city, two only are pure! One of these is a beautiful specimen manufactured by Pelletier, of Paris; the other is inferior in appearance, though chemically pure, and was furnished by a celebrated London druggist. All the rest contain enormous quantities of carbonate of potash, muriate of soda, with, occasionally, the sulphate of soda also. In many of the impure specimens, more than one half are apparently carbonate of potash; and one of the most distinguished analytic chemists of the day, who took the trouble to make a quantotalide examination of a suspected sample, has informed me that it contained of carbonate of potash, sixty-four per cent! Early in January last, my attention was first directed to this subject by the failure of my attempts to demonstrate Devergie's tests, as quoted by Dr. Christison, with a specimen I had recently procured. Soon after this occurred, a paper on the subject by Mr. Pereira, of London, was published in the London Medical and Physical Journal, in which he satisfactorily demonstrated the different adulterations above mentioned.

I will not here stop to inquire whether this mixture be accidental or designed; perhaps, indeed, the determination of the question belongs more appropriately to a court of justice than to the present investigation. Before I quit the subject, however, I beg leave most respectfully, but emphatically, to call the attention of practitioners to this adulteration; and to them I need not dwell on the manifest sources of fallacy and disappointment it may expose them to in the treatment of disease. They may readily ascertain the fact, as far as regards the carbonates, by dissolving a few grains of the suspected hydriodate in water, and adding a solution of the acetate of lead. If the salt be pure, a beautiful yellow precipitate will fall down; if adulterated with carbonates, the precipitate will be altogether white, and when dried, soluble with effervescence in acetic acid.

I return to the effect of these adulterations on the application of the several reagents recommended by Devergie. With the exception of the muriate of platinum, it totally obscures them all. The acetate of lead is thrown down white instead of yellow; the proto-nitrate of mercury is thrown down white also by the muriates, and the per-salts of mercury are precipitated as the *red* carbonate of that metal. The muriate of platinum, of the metallic tests, is alone not interfered with, *except in the degree of delicacy of its operation*, because the sulphate, muriate, carbonate, and phosphate of that metal, are extremely soluble in water; the iodide, on the other hand, being very insoluble in that fluid. In this case the superior value of the starch test, applied as before mentioned, is entirely proved by the fact, that where even the muriate of platinum affords no indication of iodine, the starch and nitric acid will at once detect it.

The next point to be considered is, how far will the effect of these metallic re-agents be influenced by the fluids of the intestinal tube, by the serum of the blood, or by the urine, since, from its rapid absorption into the circulation, the hydriodate must be sought for in the latter situations, and will very frequently be detected there, when none can be found in the contents of the alimentary canal. The question is easily decided with strictly animal fluids; the tests all act with little alteration; but neither the fluids of the abdominal viscera, the serum, nor, above all, the urine, can be regarded as pure animal fluids, as all these contain muriates and carbonates, and, the urine, sulphates and phosphates, sufficient to invalidate all, with the exception of the tests afforded by platinum and starch. On these tests, therefore, can we alone place any reliance in our examination of fluids suspected to contain iodine, either free or combined.

4thly. On these facts I propose to found a process by which, in the most complicated mineral fluids, the hydriodate of potash may be detected in the smallest proportion, and with the utmost certainty. This process consists of two parts, the first of which is merely the application of the starch and sulphuric acid to the suspected fluid *as a trial test*. The second part is the separating of iodine itself from any fluid in which the trial test has indicated its existence.

For this purpose the muriate of platinum should be dropped into the fluid; when, if the colour become immediately as deep as that of port-wine, the subsequent steps may be proceeded with at once; if not, the fluid must be reduced by evaporation to one half, and the muriate of platinum then added; the

iodide of platinum is now freely separated, but from its extreme firmness is apt to remain suspended in the liquid for an inconvenient length of time; neither can it be readily separated by the ordinary methods of filtration, without a great loss of the iodide on the filter itself, and some of it also escaping through the pores in the paper.

The coloured fluid, therefore, is to be agitated with about one-third of its volume of sulphuric ether in a stoppered phial, when any iodide of platinum present will be taken up by the ether, which, from its greater levity, soon rises to the surface of the fluid, and may be withdrawn by a small syphon or pipette. The ethereal solution thus procured is next to be evaporated to dryness, and a particle of the residue introduced into a glass-tube, sealed at one end, about six inches long, and the fourth of an inch in diameter. On applying heat the iodine is immediately sublimed, exhibiting beautifully its peculiar violet vapour, and condensing into black dendritic streaks about two inches from the mouth of the tube. If the part of the tube containing the iodine be now separated from the remainder, by cutting it across with a file, and a few drops of alcohol introduced, a brown tincture of iodine is immediately procured, the effects of which upon starch are next to be ascertained. By this process iodine may be reduced to the simple form, from one grain of the hydriodate of potash dissolved in six ounces of recent urine, which, on account of its numerous *mineral* ingredients, is the most complex fluid in which the hydriodate can ever present itself for investigation.*

This second part of the process also applies to the hydriodic acid prepared from the solid contents of the stomach, in the case of poisoning by free iodine. Little further remains for me now to add than to recommend in any case of poisoning by iodine, or the hydriodate of potash, that the examination of the urine should never be forgotten; and, if no urine can be procured in a fatal case, that the serum of the blood should be tested after coagulation; for if I may reason from the experiments of Wohlen and Stelzberger, and from the examination of six dogs poisoned by myself, the iodine or hydriodate will, in a great majority of cases, be detected in these fluids, when it has been sought in vain in the solids or fluids of the alimentary canal.

In conclusion, I trust I may be permitted to disclaim the most remote desire of starting captious objections to the views, or directions, of the authorities to which I have alluded in the preceding observations. My only wish, in truth, is, to increase, if possible, the accuracy which is so essential to toxicological analysis. If, therefore, in the preceding pages, I have succeeded in showing that any thing has been brought forward by them which is liable to objection, or that any point has been omitted which was of material importance to be retained, I have done enough, I hope, to escape the imputation, of presumptuously refusing to place implicit reliance on the tests which these distinguished individuals have proposed.

Edinburgh, 65, Lauriston Place,
July 13, 1830.

* The muriate of platinum is most readily prepared by dissolving *finely divided* metallic platinum in two parts of nitric and one of muriatic acid, evaporating the solution to dryness, and then dissolving the residuum in water. Platinum may be easily procured from the gunmaker's shops, and a very small quantity of it is sufficient for the preparation of the test.

CASE OF ENTERITIS,

In which the extremity of the Ileum was found strangulated by the Appendices Epiploicæ.

Margaret Lyons, ætat. 30, admitted at the Cork Street Hospital Dublin, May 31, 1829; third day of illness.

June 1. Complains of excruciating pain of abdomen, which is increased by the slightest pressure; abdomen is rather tympanitic; pulse quick, weak, and irregular; countenance anxious; bowels obstinately constipated; tongue loaded.

V. S. ad unc. xx; *cal. et op. et enem. purg.*; *20 leeches to the abdomen in the evening, with a warm bath.*

2. No improvement; got 20 grs. of calomel, and several purgative enemata, without effect; pulse weak.

V. S. ad unc. xvi; *cal. et op.*; *24 leeches to the abdomen in the evening.*

3. No amendment; she vomits frequently; got 30 grains of calomel since yesterday, without any observable effect on gums or otherwise.

Hirud. xxiv *abd. statim, et vesp. empl. vesic. amplum.*

4. Not better; blister gave her much pain; she is now delirious, and vomits incessantly. Died on the morning of the 5th.

I felt so intense an interest in this case (says Dr. O'Brien), that I was determined to omit no exertion to procure an examination of the body. I accordingly sought out the patient's residence, explained to her friends the nature of her case, and earnestly requested they would permit me to examine the body, after its removal from the hospi-

tal. The request was complied with, and the dissection performed by my friend, surgeon Trant, in my presence. On opening the abdomen, we were soon directed to the seat of the disease by a remarkable blackness, which presented itself in the lower portion of the ileum, where it is connected with the cæcum. On examining this portion of the intestine accurately, we discovered that it was strangulated in an extraordinary manner, by a membranous band or chord, which embraced it tightly, and completely prevented the passage of fæculent matter. It was at first imagined, that the stricture was effected by a convolution of the appendix vermi-formis, but on further examination, it was ascertained that the stricture was formed by two of the appendices epiploicæ attached to the cæcum and colon, which descended over the extremity of the ileum in a singular manner, and enveloped it in a loop, which completely annihilated its cavity. The whole of the peritoneal coat was in a state of inflammation, and the omentum, which was red and vascular, adhered to the intestines in several points. Thus I had the satisfaction of ascertaining, that no remedies which our art can furnish could have been of any avail in this case.—*Hosp. Report.*

COMPARATIVE TRIAL OF THE MILLFOIL, AND COLCHICUM, IN RHEUMATISM.

A strong infusion of the plant millfoil (*achillea millefolium*) having been recommended by Dr. Stoker as a powerful diuretic and anti-rheumatic medicine, a very severe case of acute rheumatism was selected at the Cork Street Hospital, Dublin, by Dr. O'Brien, in order to make a comparative trial of this remedy and the colchicum; the following are the heads of the case:—

Thomas Broughan, ætat. 30, canal boatman; sixth day of illness; admitted December 30, 1829. Labours under the ordinary symptoms of acute rheumatism, accompanied by fever; large joints of upper and lower extremities swelled and painful; pulse quick and hard; tongue furred and white; sensorium unaffected; urine high-coloured and turbid, like porter.

Half a pint of the infusion of millfoil thrice a day, and an ointment made of the plant to be rubbed on the affected joints.

On the third day after the commencement of the use of this remedy, the febrile symptoms considerably abated; the urine cleared, and became natural in colour; the swellings of the ancles diminished, but those of the wrists remained. The medicine was continued for three days longer—in all six days. Swellings of the wrists still remained unabated; one hand he could not move. Swellings of the ancles diminished, but still incapable of walking, without considerable pain. The medicine was now discontinued, after having been administered perseveringly for six days; and the patient was directed to take half a drachm of tincture of colchicum twice a day, the wrists and ancles being enveloped in combed wool. The medicine produced a profuse general perspiration, and in four days the swellings and pain were entirely removed, and within six days from the commencement of the colchicum, the patient declared himself perfectly well, and requested to be discharged. He was discharged cured on the 11th January, 1830, having been exactly twelve days under medical treatment.

In several other cases, the effects of the colchicum were equally decisive. The author has no doubt, from the testimony of Dr. Stoker, and from what he saw in this case, that the millfoil is possessed of some anti-rheumatic power, but he thinks it far inferior to the colchicum. The millfoil appeared in this case to have but little diuretic powers, as ascertained by the daily measurement of the urine.—*Hosp. Report.*

ABUSES AT ST. THOMAS'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—There is no part of THE LANCET that I read with more satisfaction, more instruction, than the clinical lectures of Dr. Elliotson—I therefore hope they may long continue to form a portion of your hebdomadal fare, prepared for the minds of your subscribers.

Not long since I endeavoured to call attention to the neglect evidenced by one of the officers of St. Thomas's Hospital, in his non-compliance with the orders of his superiors. In perusing No. 357, I was struck with the first of the following extracts, and conceived that the information therein contained, and the inferences deducible therefrom, would warrant me to address you; but I had scarcely proceeded half a page further, when I was amazed, utterly astounded, by the second of my excerpts; and very erroneous must my views and feelings be, if a corresponding sensation is not produced in all your readers:—

Case.—Enlarged Liver, p. 537:—"The immediate cause of his death, however, was peripneumonia and peritonitis, with which he was attacked between my visits; and I was surprised to find him nearly dying with this affection, when I happened to be in the hospital on Monday. I, of course, attempted to get away a little blood, both by venesection and leeches, but none could be obtained by the lancet, and only a very minute quantity by the latter, so that he died three

or four hours after I saw him. The breathing was rapid, and with crepitous rattle; the whole abdomen tender on the slightest pressure. Some reviving liquid medicine had been prescribed for him in my absence, which I tasted, but no statement of its nature was given."

Case.— Chronic Inflammation of the Uterus, p. 537.—"But at my visit last Monday, to my astonishment I found that since my visit on Friday, she had been seized with peritonitis, and died. I found by the book, that five grains of hydrargyrum cum creta had been given her every six hours, and I saw on the body that leeches had been applied. On examining the body, there were marks of as intense an inflammation of the peritoneum as ever I witnessed, both parietal and intestinal, and, indeed, almost every part; a large quantity of opaque straw-coloured fluid was seen, and the peritoneum covering the fundus of the uterus, and one ovarium, were of a dark colour, from excessive congestion of blood."

These two paragraphs present naturally three subjects for consideration, and I shall, *seriatim*, make some brief remarks on each.

First; *The frequency of Attendance by the Physicians.*—Not having attended the medical practice of any of the London Hospitals, I cannot precisely state the frequency of their ordinary visits; these are not, however oftener made, I believe, than *three times a week*; and such attendance, I readily admit, might ordinarily be sufficient, provided a competent person were deputed to visit on what I shall term no-days; but as this appears not to be the case, at all events at St. Thomas's Hospital, I venture to suggest the propriety of adopting the good and salutary custom of the Edinburgh Infirmary. In this institution, the visits are made *daily* by each physician; and those who have frequented its wards will, I am confident, bear ample testimony to the punctuality and regularity with which each performs his duty. I need hardly remark, had such been the practice at St. Thomas's, that Dr. Elliotson would have at least seen the two patients in question at a very critical period, and would, there is no doubt in my mind, have been successful in combating the inflammatory attacks under which they sank. I am most anxious to state, that I attach not even the shadow of blame to Dr. Elliotson. My censure is directed against the regulated custom of the institution, which allows, as appears from three cases, an interval of two days between the visits.

Secondly; *Insufficiency of the Records of the Hospital.*—This is very pointedly noted by Dr. Elliotson, when speaking of the medicine ordered in the first case in his absence; "But no statement of its nature was given;" and, in the second, I conclude no entry of the application of leeches had been made, or Dr. Elliotson would not have expressed himself, "And I saw on the body that leeches had been applied." The records or case-books of an hospital should contain a history of the disease of each patient, daily symptoms, and the remedies administered; such is the method pursued at the Edinburgh Infirmary, and it is well worthy of imitation. It is beneficial in a threefold degree; *to the physician*, as it makes him more particular in his inquiries, and more precise in his prescriptions; *to the patient*, as a faithful history of his disease and its symptoms, must lead to a better comprehension of his complaint, and, consequently, to more efficient treatment; *to the student*, as affording him an opportunity of observing the symptoms of disease, and noting the indications of cure more conveniently and advantageously than is otherwise possible.

Thirdly; *The gross neglect, or inexcusable ignorance of those acting in the absence of the physicians.*—My letter having extended further than I at first designed, I shall say hardly anything under this head, as the mere attentive perusal of the extracts will convince any one of the justice of my charge; that Dr. Elliotson was highly chagrined at the event of these cases is quite apparent, and that he considered the treatment tame and puerile we have sufficient evidence in the commencing paragraph of the case of "*Abdominal Inflammation*," p. 537, with which paragraph I shall conclude:—"The following case, in the same ward, of abdominal inflammation, well illustrates the *advantage of* ACTIVE *treatment*."

I am, Sir, your most obedient,

AN INVALID SUBSCRIBER TO THE LANCET.

London, July 13, 1830.

MEDICAL SOCIETY OF THE WEST RIDING OF YORK.

ON Thursday, the 1st instant, a numerous and very highly respectable meeting of the members of the medical profession, resident in the West Riding of the county of York, held their second anniversary meeting at the Court House, Wakefield. Dr. Thorp, of Leeds, in the Chair. The object of this meeting was to form a charitable fund, to which the necessitous medical man, his wife and family, in case of unavoidable misfortune, might look for support. The additional subscribers were numerous beyond expectation, and the chairman expressed a hope that each member would acquaint his neighbouring professional brethren with what had been done, when he had no doubt that, at the next anniversary, there would be a still greater increase. After the meeting, the members dined together at one of the inns in the town.

THE LANCET.

London, Saturday, July 24, 1830.

THE letter inserted at page 639, signed *An Invalid Subscriber*, points attention to two or three circumstances which well deserve the notice of the governors of St. THOMAS'S HOSPITAL. Nearly the whole of the internal arrangements of this Institution are as contrary to the best feelings of humanity, as they are repugnant to the dictates of common sense; but in no part of them is there apparent so much of mismanagement, and such a want of proper attention to the welfare of the patients, and the interests of the pupils, as in the department of the apothecary. It may be said that nothing should be left to the *discretion* of the conductor of this office. But were that principle acted upon in the present arrangements of the Institution, the afflicted inmates would be left, during about nine-tenths of their time, altogether without medical assistance. The apothecary, in addition to seeing that the medicines are properly dispensed, is required, by the rules of the hospital, to visit the patients twice a day, and to be always on the spot, to be called in cases of emergency. In a word, it is his duty to attend to the sick in the absence of the physicians, who are only required, by the laws of the establishment, to visit their patients on alternate days. The cases referred to by Dr. ELLIOTSON in his clinical lectures, present, we fear, but too correct specimens of the manner in which the duties connected with the apothecary's office are generally performed. From the manner in which Dr. ELLIOTSON noticed the treatment of his patients, or, rather, the neglect shown to them, his feelings of indignation were sufficiently exhibited; but the remedy for the evil is not, unhappily, vested in the hands of this humane, assiduous, and scientific physician. He is, himself, only one of the officers, and, therefore, could do no more towards preventing the recurrence of the abuse, than complain to the committee of governors. Remonstrances, however, in this quarter, have heretofore proved so unavailing, that there is little or no inducement to repeat them, and we fear that the patients have little hope of protection, except from the exertions of the independent portion of the press. If the governors have not enough of kindly feeling towards their fellow-creatures, and sufficient knowledge of their duties, to enable them to manage the institution so as to answer the beneficent purposes for which it was founded, public reprobation, and even execration, must teach them the degraded position in which they stand. Many persons, doubtless, will be ready to inquire, why, if the physicians are aware of the habitual negligence exhibited in the office of the apothecary, they themselves are not more frequently in attendance. To this it might in truth be answered, at least by Dr. ELLIOTSON, and his colleague Dr. ROOTS, that the time they pass at the hospital is thrice as long as is enjoined by the rules of their office, and when it is considered that each physician receives the miserable pittance of only forty pounds a year for his services, much praise will be conceded to them for their assiduous, we may say, extra-official, endeavours to mitigate the sufferings of the patients. With an income amounting to nearly forty thousand pounds per annum, is it not scandalous that the governors neglect to provide the patients with a *resident* medical officer, of first-rate talent, whose duties should be exclusively restricted to giving relief to the sick, and communicating instruction to the students? Out of forty thousand pounds, could not fifteen hundred, or even two thousand pounds, be appropriated for the attainment of these objects? It must be recollected, that the funds of the hospital are the property of, and belong to, the poor; that the governors are only trustees, and that the

patients have a *right to expect*, and even to *demand*, the best medical skill and attention which the income of the hospital is competent to purchase.

The adulteration of drugs and chemicals has increased of late to a most fearful extent, and impedes, we verily believe, more than any other cause, the successful practice of medicine. We have been some time seeking for a preventive to this gross abuse, and believe that we have at last acquired a knowledge of one, and hope to be able to apply it with some effect, before many months shall have elapsed. Some adulterations, detected by Dr. O'Shaughnessy, and which he has described in his valuable paper at page 637, are entitled to the serious attention of every medical practitioner.

KING'S COLLEGE.

Mr. Green, of St. Thomas's Hospital, has been appointed to the professorship of surgery in this institution, and a more eligible selection could not have been made. Mr. Green has shaken off the formality and mannerism which oppressed, and rendered disagreeable, his early efforts in the teacher's chair, and now, probably, there is no man who addresses a class more eloquently, or who is more successful in impressing the points of his subject upon the memory of his hearers. There are some other appointments spoken of in the medical department, but we hope, most sincerely, that the reports are without foundation. If true, the fate of the departments of anatomy, the practice of medicine, and materia medica, is, we fear, decided. That of anatomy, certainly; for it cannot be expected, that a man who, we are told by a thousand tongues, does not possess the physical qualifications for conveying instruction to a small private class, should be better endowed, or more fortunate in a large public theatre, where attributes of a still superior character will not only be expected, but demanded. It says little for the spirit or intelligence, which might have been expected from the University of London, and from the King's College, that they have elected their professors in private, guided by the, too commonly, false evidence of private testimonials, instead of resorting to the certain and just tests of open competition and public examination.

We extract the following from *The Times* of Wednesday last:—

"During the progress of his late Majesty's illness, it was stated in a weekly publication, and the paragraph was copied into *The Times*, that Sir Matthew Tierney had, during several days, put his name to the bulletins, without having been seen or consulted by his Majesty. Since his Majesty's decease, we have received personal explanations of the facts, and we have now no hesitation in giving the most unqualified contradiction to such injurious statements."

Had the word "advertisement," which usually precedes paragraphs of this description in *The Times*, been appended, this contradiction would have been intelligible to every one; as it stands, however, we fear that it will be understood only by a few. The editor of *The Times* certainly could not have seen it before it was printed, and its insertion, without the proper title, must have been the result of a mistake. "Personal EXPLANATIONS?" Why, we stated in a manner the most direct and unqualified, that Sir Matthew Tierney had repeatedly signed the bulletins, without having been consulted by his late Majesty. What, therefore, does the writer of the paragraph in question mean, by "personal *explanations?*" If our allegation were untrue, let us have no "explanations," but a direct *contradiction* from some person of character and veracity who was in *attendance* upon his Majesty, and had ample opportunities of *observing* Sir Matthew Tierney's movements. Had it been falsely stated that Sir Matthew was *dead*, would "personal *explanations*" have been necessary to prove that Sir Matthew was living?

Cholera, its Nature, Causes, and Treatment, with original views, Physiological, Pathological, and Therapeutical, in relation to Fever, the Action of Poisons on the System, &c. &c.; to which is added an Essay on Vital Temperature, and Nervous Energy, &c. By CHARLES SEARLE, Surgeon of the H. E. I. C. Madras Establishment. London. J. Wilson. 1830. 8vo. pp. 255.

SOMEWHAT less than one half only of this work is the produce of the author whose name appears on the title-page, the remainder having being taken from the Madras medical reports, several English periodicals, and other published works; and when we add that the former portion is written in a very confused and unintelligible style, and that the punctuation is so utterly confused that many pages would be far more intelligible without any stops at all, our readers will readily suppose that we cannot have much to say in favour of so imperfect a performance. We have, however, perused the work with great attention (from the circumstances just mentioned, at no small expense of time and labour), and we state with pleasure that the author has given a more rational theory of the disease, and a more satisfactory explanation of the modus operandi of the remedies, which have been hitherto employed empirically alone, than any previous writer, with whose labours we are acquainted. Having said thus much, we shall proceed to give an analysis of the work, or at least of those parts of it which we may deem of the greatest interest or importance. It commences with a very good, though somewhat ill-arranged "general description" of cholera, taken from the report of the Madras Medical Board, and those of the surgeons in various parts of the presidency, transmitted to and published by it. All these writers seem to agree that in every severe case there is great coldness, paleness or livor, and shrinking of the skin; and that though respiration is apparently but little affected except in the last stage of the disease, the blood is very imperfectly aerated, being "dark and thick" not only in the veins, but even when drawn from the temporal artery. The post-mortem appearances also corresponded with these symptoms, great congestion being invariably observed in all or most of the internal organs, especially the brain, the lungs, and the intestinal canal. In the former, sometimes effusion, sometimes extravasation, was observed; the lungs were occasionally found so gorged as to "resemble a mass of bruised flesh," and the internal coat of the stomach and small intestines exhibited one uniform dark-red surface, or numerous patches of a brighter colour. The liver does not appear to have been so constantly affected, though it was, as well as the spleen, often found distended with dark blood. The gall-bladder was almost invariably found full of bile, but with its duct pervious; and the urinary bladder as invariably empty, and contracted to the utmost. We have particularly noticed these points, because they do not seem hitherto to have attracted sufficient attention, and because it is chiefly upon them that the author has founded his theory of the disease. Passing over the author's own case, which is described with tedious minuteness, and does not appear to us to offer anything of particular interest, though he states that it was from attention to his own feelings and "the progression of the symptoms under personal experience" that he was enabled to form a more correct notion of the nature of the disease; we come to a long chapter on "malaria." The most valuable part of this is also taken from the Madras medical reports, the writers in which (at least all those whom the author has quoted) agree in attributing the disease to the exhalation of certain miasmata from swamps, stagnant water, or putrifying animal or vegetable substances; and some of the facts adduced in support of this opinion are very striking and conclusive; so powerful, indeed, was the influence of this morbific cause, whatever may have been its nature, that in several places the cattle and even poultry died in great numbers, evidently of the same disease; for the morbid appearances on opening them, corresponded with those which we have mentioned as being observed in the human subject. Nothing is stated which could fairly lead to the supposition of the disease being infectious, nor does it appear that any of the gentlemen alluded to, entertained the opinion that it was so. The author's own observations in this place are of little value, and throw no additional light on the subject; we therefore pro-

ceed to his theory of the disease, which, though far from perfect, and mixed up with some absurdities, deserves attention, as being decidedly the best that has hitherto been offered. His opinion is, that the morbific matter, or miasma, does not act primarily upon the nervous system, but is absorbed from the skin and lungs, and is mixed with the blood, the whole of which is thus contaminated, and rendered unfit as well for nutrition and secretion as for duly stimulating the heart and arteries. As to the brain, he considers it to be affected only in a secondary manner, by its no longer obtaining its accustomed stimulus, and receiving impure venous, instead of healthy arterial blood. In this manner he accounts for the external coldness, shivering, and lividity, and the internal congestion, which, as we have already mentioned, are almost invariably observed, and not unaptly compares the disease to the first stage of fever, especially to that form of it which was called by Armstrong "congestive typhus," to which it certainly seems to bear considerable resemblance, the principal difference between them being, we imagine (though he does not mention it), that in the one the head, in the other the abdomen, is the principal seat of the congestion. To this deranged state of the circulation, he refers all the principal phenomena of the disease. Thus, "the sickness, or vomiting, in the early stage," he thinks "attributable to the stomach's defective nervous excitement from diminished energy of the brain;" the serous discharges from the bowels, and the oppression, burning heat, and pain in the abdomen, to the distention of the intestinal vessels, especially of the branches of the vena portæ, which, as being the least under the influence of the "sucking power of the heart," would be the first to suffer from any cause which should diminish its energy. The spasms, again, which form so prominent a feature in the disease, he refers to congestion at the roots of the spinal nerves, a condition first noticed by Dr. Saunders, in the Edin. Med. and Phys. Journal, and which the author states he found to exist in every case where he examined the spinal chord.

It is unnecessary for us to consider here, whether the nervous or vascular system be primarily affected; at any rate the existence of internal congestion cannot be disputed; and to it, whether produced indirectly through the medium of the nervous system, or directly by the actual contamination of the blood, most, if not all, the symptoms may be very fairly referred.

The author has made three species, or varieties of the disease, which he has denominated, not very happily, cholera asphyxia, cholera congestiva, and cholera morbus; the first of these is characterised by the sudden oppression, or extinction of the vital powers, "a mortal coldness, extreme prostration of strength, with arrest of the circulation, come on from the beginning, and death follows, perhaps in half an hour, without a struggle, though, occasionally, convulsions have been noticed."

The second, which might far better have been called spasmodica, since the spasms are much more marked in the last, and the congestion is less than in the first species, is that form of the disease which is most generally known; its symptoms being giddiness and purging; the evacuations consisting of a thin mucus, or mere serum, great prostration of strength, coldness of skin, debility, and paleness; sometimes loss of pulse, precordial oppression, burning heat at the epigastrium; the extreme thirst, and violent spasms affecting more or less every part of the body, but especially the lower extremities. The third species, so absurdly denominated "cholera morbus," is only a lesser degree of the preceding, and is the form not unfrequently met with in temperate climates.

The treatment recommended by Mr. Searle is, of course, adapted to his views of the nature of the disease; thus he employs bleeding as early as possible, and on the same principles as in asphyxiated persons, mercury to stimulate the vessels, and give energy to the circulation; saline purgatives to relieve the overloaded intestinal veins, emetics, sinapisms, and blisters, to induce determination to the skin, &c. Opium, which has been so extensively employed, he would altogether prohibit, except at the commencement of the disease, when it comes on insidiously, with no other prominent symptom than diarrhœa; also in the last stage, or that of collapse, and then only in small doses; and, indeed, since it has been sufficiently proved that the chief feature is internal sanguineous congestion, the

use of a remedy, which is well known to induce such a state, is manifestly counter-indicated.

After some judicious observations by the author on the details of treatment, and on the best prophylactic means, the work is concluded with a large number of cases taken from the Madras medical reports, the contributions of more than forty practitioners. The results of these are very important, as showing, on a large scale, the comparative success of the different methods of treatment employed. The least successful method was that with opium and stimulants, or these remedies combined with calomel. Under the use of the latter, in one place, out of 130 patients, 74 died; and where no mercury was employed, the proportion of mortality was still greater.

Emetics, especially tartarised antimony, in pretty large and repeated doses, appear to have been more efficacious; and it is expressly stated by several of the writers who employed them, that their good effects were not so much in the removal of any morbid matter from the stomach, as in the determination to the surface which they induced. In one instance, 18 out of 34 died under the stimulating and antispasmodic treatment, and only 46 out of 133 when tartarised antimony was employed. In several places the most active purgatives, as calomel and colocynth, and even the oil of croton, constituted the principal remedies; the portion of those that recovered under this treatment, appears to have been very considerable; in one place the deaths were only 25 out of 95.

Saline purgatives, as sulphate of magnesia or soda, were never tried alone, but were found to be peculiarly efficacious when given in small and repeated doses, in removing an excessive and tormenting thirst "which no liquids could quench."

The most efficacious remedy, however, appears to have been bleeding, with two exceptions, where it was probably employed at too late a period of the disease; all the surgeons who employed this remedy, speak of it in very high terms. In some of the reports it is stated, that whenever bleeding was had recourse to at the commencement of the attack, and a moderate quantity of blood could be obtained, the patient invariably recovered. In three cases which are related, after calomel with opium and stimuli had been given largely without producing the least benefit, the patients, who were evidently sinking, were saved by bleeding on the second day after the attack; the blood was obtained with some difficulty, was very black, and coagulated immediately. In another case venesection was employed at the commencement of the attack, to the extent of 55 ounces, with great relief, but 80 drops of laudanum having been given immediately afterwards, the vomiting, dyspnœa, and lividity of the skin, returned, and a second bleeding to 30 ounces was required. Notwithstanding the ill effects of the first dose, the laudanum was again given, though in smaller quantity, and with ammonia and camphor. The patient, however, ultimately recovered. The most successful treatment of all appears to have been very nearly that which the author recommends, viz., active bleeding at an early stage, purgatives,—especially calomel, blisters, and stimulating liniments, &c.; under this method, the mortality was only one in fourteen; a strong argument in support of the correctness of the opinions of the author.

As to the concluding essay (two pages and a half of which are copied from the preceding part of the volume), its object seems to be, to prove that the nervous fluid or power agrees with the electric fluid, that it is generated during the conversion of venous into arterial blood,—is conveyed from all parts of the body to the brain and spinal chord by the posterior or motor nerves, and is redistributed thence by the anterior nerves, or those of sensation. These propositions are, however, scarcely supported by any facts or arguments, and, indeed, the whole essay is written in such a careless manner, that it is impossible to ascertain correctly the meaning of the author.

Observations on the Blood. By William Stevens, M.D., &c. &c. Read at the Royal Coll. of Phys., May 3, 1830. London. Burgess and Hill. 1830. 8vo. pp. 20.

A portion of the doctrines of the humoral pathologists, which, however mixed up with absurdities, were by no means entirely destitute of foundation, and were surely too hastily and inconsiderately rejected, has of late been again brought forward with considerable claims to the attention of the medical public. Dr. Clanny, in his com-

munications, clearly showed that the blood was altered in composition, as well as in appearance, in at least one kind of fever. More lately Mr. Searle has maintained the same proposition with regard both to fever and cholera, and now Dr. Stevens has not only further supported the opinions of these two writers, but has, very probably, pointed out the real nature of the changes which the blood undergoes, and has made a very important practical application of the circumstance. We are unwilling to enter into any discussion upon this important subject, as the paper of Dr. Stevens is stated to be only the precursor of a large work; the purport of its contents, however, may be thus briefly stated. The author having observed, that in the yellow fever of the West Indies, the blood, which he considers the primary seat of the disease, was always black, thin, and dissolved, whether drawn during life, or taken from the heart and large vessels after death, was induced to examine it chemically, and invariably found that it was altogether, or in a great measure, deprived of the saline substances which it naturally contains. Finding also that various neutral salts had the property of restoring not only healthy venous, but the black febrile blood, even when taken from the heart after death, to the bright arterial colour, he determined upon trying these substances as remedial agents on the living body, and accordingly gave some neutral salt, especially the rochelle salt and carbonate of soda, in every case of fever. Unfortunately he has not stated at what period he began to administer these medicines, nor has he mentioned the dose, nor indeed any of the details of the treatment, except that "bleeding and active purging" were first employed. The method, however, appears to have been exceedingly successful, since in one place, in the Island of Trinidad, out of 343 cases thus treated, not a single patient died; so that the author is fully justified in saying, as he does in conclusion,—

"From the moment that we considered fever as a disease both of the fluids and solids, and met it accordingly, we have been able to prevent much suffering, and to save many valuable lives; and in those islands where this treatment has been fairly tried, that hitherto fatal disease, the yellow fever, has, in a great degree, been disarmed of its terrors."

An Inquiry concerning the Indications of Insanity, with Suggestions for the better Protection and Care of the Insane. By John Conolly, M.D., Professor of Medicine in the University of London. London, John Taylor, 1830. 8vo. pp. 495.

The claims of Dr. Conolly to publish his views on the subject of insanity, are principally founded upon his attachment for five years to the "lunatic houses" of the county of Warwick, and his present object is "to render the recognition of insanity less difficult, by showing in what it differs from those varieties of mind which approach the nearest to it; and to point out those circumstances which, even in persons decidedly insane, can alone justify various degrees of restraint,"—which, in other words, may be taken as expressive of the author's opinion, that few of those who are generally considered to be insane, are really so, and that amongst those few, the degrees of confinement should be various. Whether the volume in which these two positions are enforced, is not infinitely more ample than the occasion demands, remains to be ascertained. At the same time, however, it will be but fair, perhaps, to afford the author credit for something more than he actually promises; for if his "Inquiry" also unfolds a new and unusually lucid arrangement of the various "indications" which professional men have gradually accumulated on the subject of insanity, a meritorious and honourable "palm" will have been won. It does not particularly strike us, however, that such a summary was needed, and we suspect, upon a cursory glance at the contents of the volume, that it is, for the most part, rather a vehicle for a series of elegant and well-finished sketches of human character, than the much-desired contribution of a philosopher to the stores of science.

The indiscriminate restraint which is imposed upon supposed as well as real lunatics, calls forth the strictures of Dr. Conolly at the very onset of the work; but an ample apology for the mistaken zeal (to call it at present by no worse a name) of those upon whose authority it is adopted, is said to be found in the difficulties which beset a proper education in the symptoms of insanity. During the whole period of his novitiate,

the student never sees a case of insanity but by rare accident, and his ignorance of the disorder, therefore, is attended, when he is in practice, by the committal to a mad-house of more sane and curable cases than of confirmed and hopeless ones,—a custom which the timidity of friends or the dishonesty of keepers speedily ratifies. The cause, the effect, and the maintenance, of the system of confinement, call forth the severest deprecations of the author, whose censure, however, but ill accords with a note that he has appended to the end of the chapter containing it.

"The great profit accruing from a part of practice, almost separated from general medicine, cannot but now and then operate against proper caution in admitting such representations. When men's interests depend upon an opinion, it is too much to *expect* that opinion always to be cautiously formed, or even, in all cases, honestly given. The most respectable practitioners in this department openly justify the authorising of restraint *before* the patient is seen, and on the mere report of others; and it seems that depositions to the insanity of individuals have been received in courts of law, concerning persons with whom the deponents have *never* had an interview, on which depositions proceedings have been partly founded, of which the results were," —the imprisonment and plunder of the outraged individuals. "There is the *ready* and *indisputable* 'certificate'" (And, oh! if *indisputable*, what shall we say of the man who does not permit himself to "expect" honesty of the signer, and what of that signer who is ever "ready" to be dishonest?)—"the indisputable certificate of a medical man,—physician, surgeon, or apothecary, stating that the man is mad, and must be confined in a lunatic asylum. The owner of the lunatic asylum is a *most respectable man*,—a neighbour, a friend perhaps, and the asylum is his fortune. To depreciate it, or to cast a doubt upon a case where he has none, may be ruin to him."

And, therefore, the poor, degraded, eccentric creature, is cast into a dungeon, whence it is folly to consider escape "easy," or liberty within the power of his repossession. Now, for the prevention of so grievous a mistake, we are told that the legislature, even the LEGISLATURE, has no provision. Where then shall we turn for protection? To the bar of public opinion? To the punishment which attends the detection and exposure of such thoughtless, such wanton, such dishonest, such infamous encroachments on the liberty and property of the subject? Not according to Dr. Conolly; for, by his creed, whether ignorance, or ready subservience to the will of others, or avarice, be the impulse, this belongs rather to the *system* which is followed with respect to cases of supposed insanity, than to the individuals who actually set that system in motion. Wretched piece of sophistry, which, in order to pay a worthless compliment to "kind and skilful" offenders, and throw a flimsy shield between the public indignation and its instigators, would dissuade that public from the infliction of the shame which is its only safeguard against the "grievous mistakes" of men who, in every sense of the word, are abandoned rogues.

Dr. Conolly proposes as a means of rendering medical men familiar with disorders of the mind, and thus of rescuing lunatics from the clutches of those whose interest it is to represent such maladies as more obscure and more difficult to manage than any others, that a clinical school should be attached to every public lunatic asylum.

"It is true that insane patients are not always in a state to be visited by pupils, and that a very strict discipline would be necessary. But such discipline (he observes) is quite practicable, and such arrangements might be made as would at once guard those patients from disturbance whom disturbance might injure, and present a sufficient number of instructive examples to the student. In some cases, also, the change of persons and of conversation would be actually beneficial to the patient, and would only be what they are now accustomed to during the visits of those who come to see them from mere curiosity. Among the many intelligent young men resorting to the London schools of medicine and surgery, some would soon be found who would zealously study mental disorders, and by acting under the physician or medical superintendant, must materially assist him. (And so on.) We should then see how much could really be done in these affections, and should hear no more of mistakes which have, from time to time, afforded so much matter for litigation, so much personal uneasiness, and, in some cases, so much oppression and fraud."

The course by which the author conducts his investigation does not permit him to deal out his well-merited, and too-correctly-founded, strictures by halves. In order to furnish evidence that discrimination between the really sane and the insane is greatly needed in this country, he draws a vivid

picture of the present condition of lunatic houses and lunatics. The repulsive darkness and mystery of the former, operate in the strongest manner against inquiry into the state of their inmates, and, consequently, many circumstances exist, even in the *very best* establishments, which are highly unfavourable to those who have the misfortune to be confined in them. For, First, though the shades of insanity are as variable as character, the same restraint is imposed on all; Secondly, moral and mental treatment is wholly neglected; Thirdly, the care of the patients is confided to those who are often ignorant of disease of any kind; and, Lastly, the keepers are amongst the most uneducated of human beings. The whole picture is too impressive to be curtailed.

"The patients are transmitted, like stock in trade, from one member of a family to another, and from one generation to another; they come in youth to the father, they linger out their age with the son. One system of restraint is enjoined which saves all trouble, and a book of prescriptions is bequeathed as a substitute for the physician or apothecary. When a visit of inspection chances to be paid, and the patients are dressed, and the house is set in order, it is forgotten that, with very rare exceptions, *the same* miserable prisoners are for ever presented—at each visit declining more and more in imbecility; that some have lost the power of motion, others the habit of speech; that some have become desperate, and some, after vain desperation, sullen; and that, of those first seen, a very large proportion will remain in the institution to the end of their lives. One or two may have got well, and have been sent home, but the majority of the incurable is still immense; and when we curiously trace the remains of intellectual light, or the vestiges of grace and beauty in these unhappy beings, we too seldom remember the possibility that more of both might have been spared under a different system of management."

A proper knowledge of the powers, infirmities, and diseases of the mind, must be the basis of the reform which is so imperiously demanded, and to the consideration of these the author leads us in a chapter on "The constitution of the human understanding." Let us see how far we can proceed on the road towards an acquaintance with the indications of insanity, by the lights which the author holds at our feet. May we be led but seldom into the rough and thorny paths of metaphysics. The statement which we subjoin, constitutes the views of our author when stripped of the verbiage by which they are amplified into a couple of hundred pages.

The attempts of medical authorities to lay down some rule for clearly distinguishing insanity from sound mind, have hitherto been totally unsuccessful. Hence the decisions of professional men are always perplexing—often unjust. The disease, in fact, has been partially and incorrectly studied; the principles of insanity have been mistaken. What, then, is the proper course of study? It is that of giving "a due consideration to the *intellectual constituents* of what is called *sound* mind, and taking an enlarged view of its *varieties*," by doing which, it will be found "that the departures from sound mind may generally, if not always, be recognised." But what meaning is attached to the idea of the mind? The reply of Dr. Conolly is not given in few words; it must be gathered from the following description of its functions, which forms the basis of whatever is novel in the author's future proposition. Man derives his principal knowledge of the things around him from the exercise of his senses; these convey to the mind a knowledge of the properties of surrounding objects, and, while in a healthy state, the sensations and experience of all those who possess them, are pretty nearly alike. The exercise of each of these sensations, excites that state of the mind which is called *attention*. That attention is voluntary, and can be changed in a moment, and the impression which has been made by it can be recalled at pleasure. The colour, the form, the smell of a rose, can again and again be brought to the mind. New impressions which have been received from other objects, are equally within the influence of the will, and this faculty constitutes the power of *comparison*, by means of which, the decisions, opinions, and judgments, of the mind are formed, and finally lead to choice and desire, giving rise, by a natural process, which we need not explain, to *imagination*.

"In these operations, we observe, then the offices of *sensation*, *attention*, *comparison*, and *memory*, with a limited exercise of *imagination*; the act of recalling impressions with the objects which first excited them, seeming to be conjointly performed by imagination and memory."

Now let us see what rules the author deduces from this, by the aid of which we can form a sure diagnosis of insanity.

Existing in perfection, the results of these faculties are, various acquirements, correct opinions, sound judgments, wise determinations, and reasonable actions, and *reason* is the product of their exercise, the whole clearly depending on the possession of well-constructed and healthy organs of sensation, for without that, the faculty of *attention* cannot be fully commanded, and all the effects to which attention leads, become consequently, unsound. Without occasion, then, to advance another step, or deviate for one moment into the interminable iteration and illustration of these positions in which Dr. Conolly has indulged, we arrive at the practical rule (of its importance or novelty in the present state of our knowledge we say nothing), "that those persons who are called upon by their professional duties to give an opinion in cases of impairment of mind and of insanity, should minutely attend to these characters of the mind in health," by doing which, they will arrive at a knowledge of the fact, that there are many instances of inequality, weakness, and peculiarity of the mental faculties, which yet do not produce insanity. First of all, deficiency in the organs of sense diminish the power of comparison and correct judgment. The party is not insane, perhaps; for if, for instance, the sight be absent, though comparisons cannot be made through the medium of the eye, and the mind is, therefore, to a certain extent impaired, yet the blind do not *endeavour* to reason about things in which the sight is concerned. His comparisons are *limited*, but he himself is not insane. Again, the organs of sense, though perfect in structure, may have been so little exercised, that the power of connecting high causes and effects, as in boors and clowns, is absent, while the senses, being unskilfully handled, cannot always be depended on, even in cases of personal evidence. Yet insanity, or, rather, let us for ourselves say, the insanity which justifies interference, is not present. So, too, delusion may afflict the educated in consequence of accidental accumulations of blood in the head, the effect of which is by no means inconsistent with perfect sanity, because the faculty of comparison still being in force, the subjects of it do not, as in instances of real madness, believe in the deception which has temporarily occurred. Yet, undoubtedly, the period of delusion is, in most cases, a period of insanity; it is so until, by observing the unconcern of others to the false images which constitute the deception, the patient is convinced that they are unreal. Sir Joshua Reynolds, after being many hours occupied in painting, would walk into the street and see trees in the lamp-posts, and shrubs in the passengers, and a medical student, after a night of study, would describe the town in which he was born, as being situated in the deltoid muscle. "If Howard," said Dr. Reid, "had not been a philanthropist, he would probably have been a madman."

But *defect*, also, of the comparing power, may exist in certain individuals without insanity.

"The industry of such men is great, but generally ill-directed; they do not distinguish trifles from things of importance, and are generally occupied about matters of little worth. In the profession of medicine, for instance, we see them engaged in the prosecution of minute observations; all the larger features of pathology, all general principles of practice, escape them; but a symptom not heeded or valued by others, or any deviation from common anatomical arrangement, or a line in the face, or a pimple on the hand, or a streak on the tongue, or a pretended specific, fills them with the anticipated delight of a discovery. They do not compare one symptom with another; they pronounce diseases to exist which are really not present; they do not contrast the reputation of a new medicine with that of other medicines once brought forward in the same way, and then abandoned; they do not compare effects with causes, but suppose they have cured diseases which were only imaginary, with specifics of which the virtue is equally imaginary; and thus, but in a state of continual satisfaction, they grow old without experience."

Eccentricity is a gradation of the same defectiveness in the power of comparison, approaching, perhaps, as nearly as possible to insanity, but not requiring or justifying restraint or compulsion.

Neither is impairment of the memory, where comparison is weakened, and the imagination is oppressed, evidence of lunacy. John Hunter was, on a particular occasion, and in the vigour of his life, so

affected for nearly half an hour with loss of memory, that he could not recognise the house nor the street in which he lived.

Nor is activity, vagrancy, or poverty of imagination, insanity, though the "stream" may partially inflect towards that in its course. When the association of ideas is so involuntary, so imperative and uncontrollable, that we cannot command, revise, or correct them—cannot, in fact, exercise our comparison concerning those ideas or feelings which constitute imagination, *then* we have lost our reason.

The course which Dr. Conolly now pursues, is too tedious to suit the rapid temperament of those, who, when they read, anxiously seek for "some new thing," and skip the prose which is sometimes called potter. The unimaginative, the thoughtless, the ambitious, the credulous, the projecting, the ridiculous, the romantic, the obstinate, the cruel, the over-learned, the violent, the hysteric, the silly, the intemperate, the over-susceptible, and fifty other classes of strange characters, "variable as the shade of the aspen," and which are sketched off with uncommon readiness of language and delicacy of manner, serve to illustrate the main position of the author. They are of the number of those whose actions are so plainly, "impetuous follies" only, dangerous to none, that restraint within the walls of a cunningly-named "Retreat," is a rank imposition on the most sacred of all rights.

Of the next chapter to that through which we have now been glancing (the sixth, a chapter entitled "Modifications of Intellectual Activity and Power by various Stimuli," p. 178), it would not be unjust to say, that it might with very little trouble be wholly omitted in binding up the volume, without the chance of detection even by the careful reader. It contains a fund of anecdote relative to senators, authors, soldiers, musicians, and others, whom intellectual greatness visited by fits, but has no decided purport which is not served by other parts of the work, and is only rescued from total condemnation by the following saving clause, of which, by its transcription, we give the chapter the full benefit:—

"But it may be asked, why are so many examples here accumulated? &c. It must be remembered, that I have stated it to be my opinion, that correct views of insanity are only to be obtained by a wider range of observation of the peculiarities of mind than has been commonly thought necessary. No circumstance which has been mentioned, or which remains to be mentioned, is without some connexion with the duty of those who profess to understand when the mind is diseased, and requires assistance."—p. 217.

The chapter which afforded us so little, is followed by one which promises a better, harvest—The effect of disease on the mind; more stalkingly entitled in the work,—"Modifications of intellectual activity and power by disease;" but there are really few or no ears in the field which can be turned into bread. The search is not unpleasant, if the gleaner be not hungry, though it is very probable that something more than a walk is lacked. The traveller, therefore, hastens onwards, and as he leaves the spot, reads on the post at the end of the path—"Notice;—That the maintaining of a perfectly sound state of mind requires attention, not only to its faculties, feelings, and emotions, but attention also to the bodily health,"—which is the sum and substance of the whole of this division of the work.

But we have one more chapter to go through—The influence of age upon the mind—before we can arrive at the subject of insanity itself; for the "indications" of that which is *not* insanity, occupy a far greater space in the book than the indications of that which is. But it yields us nothing, and with reviewers' boots we pass the entire and very barren field, buttercups and all, at a step.

Now, the section headed "insanity," is very long,—is more than we can afford to analyse at present; but the object of it is, in great measure, to prove that insanity is "*the impairment of any one or more of the faculties of the mind, accompanied with, or inducing, a defect in the comparing faculty*," and over this definition, which is the heart of Dr. Conolly's long book, we intend to leave our readers to ponder until next week, when the manner of its illustration, the advice he has to offer to medical men, and the "suggestions" which are mentioned in the title, will occupy our attention for a very brief period. But before leaving the work now, we shall make the following extract from the commencement of the chapter at which we have just arrived. The scene occurred during a visit paid many years

since, by the author, to the afflicted inmates of a large lunatic asylum.

"On entering a long gallery, I was struck with the figure of a tall, portly, and good-looking gentleman, whose appearance differed much from the common crowd of noisy madmen. He was dressed in black, his countenance was manly and expressive, and his manner so grave and natural, that but for certain peculiarities of ornament about him, I should have mistaken him for the chaplain, or for the physician to the establishment. But across his breast he wore a piece of list, arranged like the ribbon of the order of the Bath, and he had on a leathern apron, indicative of his being a free-mason. Advancing towards the friends who were with me, he accosted them with much ease and affability, recognised some of them, and made familiar inquiries respecting their families, noticing the rest with some appearance of condescension; then, drawing near to one who had occasionally visited him before, with his finger on his brow, and a look of amazing importance, he said in a low impressive voice, 'Very remarkable things have happened since you were here, I assure you—some very singular circumstances.' Then, turning abruptly to one of the party who was an utter stranger to him, as if for introduction before venturing to open matters of consequence, and being told the stranger was a Frenchman who had served in Russia, and had been on the staff of the emperor Napoleon at Waterloo, he left his communication unfinished, and gazed on the foreign officer with an air of surprise, mixed with evident gratification, arising from the supposed honour of such a visit, and remarked that he knew Bonaparte very well himself; that he and the emperor had, in fact, been at the end of that gallery long ago, surrounded by men with fixed bayonets, and that had they touched Napoleon, he should have been the first man to draw a sword. Suddenly quitting this high theme, he eagerly inquired if we had brought him any Parisian trifles. It happened that we had only some Parisian snuff; but this delighted him exceedingly. He then told us that he had had a sore contest with the devil in that gallery, whom he met and fought, breaking two of the devil's ribs. The devil, we found, had been an unfortunate keeper, to whose physiognomy he had taken some dislike, and whose ribs he had truly enough broken. With dignified earnestness he assured us, that he had received a particular commission from the Almighty, and he invited us to enter his apartment, that he might show us 'the holy angels, the Virgin, and Venus;' stopping, however, to ask leave to do so from the keeper, and evidently with unfeigned submission. Over the door of his apartment he had pinned up a paper, containing a long list of the wonders within. The walls, which had been white, were written upon in almost every part, with black letters, describing, chiefly, the never-ending titles of his greatness and power; as 'Supreme from the Almighty,' 'Mighty Prince,' 'Mighty general in chief,' 'Great mighty grand admiral.' Intermixed with these, were the names of many heathen deities, and, with these, the names and pictures of Lord Nelson, Lord Wellington, d'Alembert, and others, besides a picture representing the Father, the Son, and Holy Ghost, and a portrait of himself, with his order of list and leathern apron. On the picture representing the Holy Trinity he dwelt with mysterious emphasis, insinuating that he was *one* of them, but that he did not like to say more about it just then. Then he reverted to Bonaparte, by whom, he said, though much good had been done, much had been left unfinished, which, 'if he had his health,' he hoped he should complete. He enjoined us to make the foreign gentleman aware how great a man he had been speaking with, 'one who had received a commission from God Almighty,' and 'a great prophet;' and he also begged us to send him the latest reviews, which he said, very positively, were not to be given to the superintendant, looking, however, timidly towards the superintendant at the same time. Lastly, he committed to our care two small papers very closely written on both sides, and every word underlined; one of them was to be given by our foreign friend to the French ambassador; the other was an exact copy of it, and ran thus:—'In the name of the most high, eternal, Almighty God of heaven, earth, and space, I command you to procure me the following articles immediately: a holy bible, with engravings, &c.; a concordance, a martyrology, with plates. Some other religious books. A late geographical grammar, a modern gazetteer, newspapers, magazines, almanacks, &c., of any kind or date. Musical instruments and music. Large plans, maps, guides, directories, and histories of Edinburgh, Glasgow, London, Dublin, Paris, Rome, Naples, &c. Histories of Rob Roy; Riley's Itinerary, and his other works. Histories and memoirs of George the Third, Queen Charlotte, Princess of Wales, Princess Charlotte of Wales, the Regent and Court, Prince Cobourg, Marquis of Hastings, Lords Sidmouth, Castlereagh, Bonaparte, the Beast, &c. Wines, fruits, lozenges, tobacco, snuff, oysters, money, every thing fitting to Almighty God. Answer this in three days, or you go to Hell. P. S. A portable desk and stationery, and a dressing case.' Stamped upon this authoritative document were some circular pieces of paper,

on which were scrawled his signature, with the initials of all his high-sounding titles. Promising to take care of these papers, we passed on to other patients."—p. 289.

"In what does this man's mind differ from sound mind?"

Hippodonomia, or the true Structure, Laws, and Economy of the Horse's Foot. By Bracy Clark, F.L.S., Member of the Royal Institute of France, &c. London. Underwood. 1830. 4to.

It is not a common occurrence for an author who has laid before the public an original book, to live to see his doctrines overcome all opposition, and obtain the station for which they have struggled, and, after a lapse of nearly thirty years, to witness the publication of a *second edition* of a work which, on its first appearance, was looked upon by those to whom it was addressed as the production of a visionary theorist. The horse's foot is, confessedly, the most important object of veterinary study; and the opinions of the author before us, however far they are at present from being generally *practised*, have gradually obtained assent from the unprejudiced part of the veterinary profession, and, by their gradual adoption, must, finally, effect a revolution in the cruel and ruinous system of treatment which this organ has hitherto received.

The principle of elasticity in the horse's foot, which Mr. Bracy Clark was the first to point out, has now become so well known, that it has been difficult for an author to write on this subject without adopting it as the leading feature in the practice of shoeing. We can only thus account for the absence of new works on this useful art during late years, though formerly it afforded a never-ending theme of controversy. The field has been left open to the advocates of the "expansion" system, some of whom, however, have endeavoured to establish a claim to original discovery by adopting a method of shoeing, varying slightly from that practised by Mr. Clark, though proceeding on the same principle and producing the same effects. Our own opinion of the doctrines of this author has been long before our readers, and the progress of time continues to justify our view of his discoveries and the strong approval of them contained in The Lancet more than three years since. A review of his first work on the foot, published in 1809, will be found in vol. XI, page 488. The edition before us has been published in parts, with a new arrangement, and very considerable and valuable additions. To make extracts from it would be superfluous, as its objects, if not already well known, must be sought in the book itself. Mr. Clark commences with an animated account of the evils resulting from the ordinary and destructive practice of shoeing. After alluding to the discovery of the principle of elasticity in the foot of the horse, he refers to its existence in the feet of various animals, from the squirrel and the cat, to the camel, the ox, and the elephant, and thence to the horse itself. The greater part of his description of the internal foot, which he divides into "attaching" and "sub-attaching" parts, is entirely new, so that many fresh synonymes occur for structures which had hitherto not been exhibited or explained at all. The plates are executed in a style which is seldom seen in works of this kind; and although the learned and indefatigable author might, perhaps, have brought out his book in a more popular form, he could not have bestowed greater pains on, nor done greater justice to, his favourite subject; and we trust he will increase the stock of honourable fame by which he is already distinguished. How deeply it is to be regretted that such a man as Mr. Bracy Clark does not occupy the Professor's Chair in the Veterinary College.

METROPOLITAN SOCIETY OF

"GENERAL PRACTITIONERS."

To the Editor of The Lancet.

Sir,—As I perceive by your remarks upon the Prospectus of the Metropolitan Society of General Practitioners in Medicine and Surgery, that you disapprove of the principles of its formation, and are otherwise hostile to its progress, I trust you will allow a member of the Committee to explain the intention of its founders, and to reply to your remarks.

You object to the formation of this Society, it being, as you state, founded "without public notice, without public discussion, and without the concurrence of the great

body of educated medical practitioners." I beg to state, that the formation of this Society originated among the stewards of the late proposed medical dinner, intended to be given for the purpose of commemorating, and making, as much as possible, a lasting impression of the good effected to our profession by the decision of Lord Tenterden in the case of Handey *versus* Henson. Those who embarked (I will say with zeal) in that cause, were unwilling to separate without doing all in their power to effect some good to their profession. It was, therefore, in this view that the Society originated. The want of some society of general practitioners, which should have for its object the assertion of any professional right, or the protection of any individual principle or member, was felt to exist, and the zeal which roused us to rejoice in the increase of our professional character, led us to endeavour to erect a standard, around which our brethren might rally, and unite for the support of our professional interests. To form a society as you have hinted, by public notice and public discussion, is a scheme, however feasible it may appear upon paper, altogether impracticable. Twenty public meetings will be held, without determining upon any actual or definite purpose, and will often end in a total abandonment of the object intended; or if it is persevered in, it is by leaving it to a committee to prepare and arrange a plan. Again, this committee is found to be too numerous, upon the principle that numerous opinions produce a discordant result; and as in this form the matter cannot proceed, a sub-committee of some two or three is chosen, to whom the whole business of arranging and preparing a plan is resigned; thus the public meeting resolves itself at last into a meeting of two or three, to arrange and model a plan, and, therefore, the fault of which you accuse the founders of this Society is, that they commence in the first instance with the very means of effecting their purpose, while your public notice and public discussions must at last have terminated in, after much delay, great expense, and a probable risk of its total abandonment. That any business is best arranged by some two, three, or even *one* individual, than by numbers, I will take your own words to prove; for in commenting upon the failure of our late public dinner, you stated, that "had they (the stewards) deputed *one* of their body to conduct the proceedings, &c." "the dinner would have had the most triumphant result."

Another objection which you make, is to our title of general practitioner; you state that "no mention is made of any institution for such a description of persons as general practitioners, in the charters of any of the Colleges of Physicians or Surgeons, nor even in the Apothecaries' Act of 1815, and that "the individuals thus styled being surgeons in the fullest sense of the word, and belonging in almost every instance to one of the medical colleges or companies, why should they assume an inferior title, become members of a society of subordinates," &c.? I conceive, Mr. Editor, from the above remarks, that you are altogether mistaken on the spirit and object of the society, and that you entertain some erroneous notions of what constitutes the dignity and consequence of any society or body. The title of general practitioner, is that which, more than any other title, is descriptive of what we are; it is a title of general usefulness, and we want no other assumption to give us dignity. You state that we are surgeons in the fullest sense of the word, and that we are assuming an inferior title: this I deny; a general practitioner is not a surgeon *only*—he is more—he is *superior* to a surgeon—he can claim a degree of confidence, to which the mere appellative of surgeon does not entitle him. A surgeon is one who can amputate a limb, secure an artery, reduce a fracture or a dislocation, &c., but who does not understand, and cannot prescribe for, an internal disorder. A physician is one who can prescribe for a cough or a diarrhœa, but is of no use to his patient if he should break his leg or dislocate his joint; the general practitioner, on the contrary, does not, when called upon, stop to inquire if his patient is affected with a surgical or medical disorder; he feels himself "doubly armed" for either emergency, and by this double application of his skill, he feels and is able to assert, his superior consequence; and it is upon these grounds we take our stand; we do not want to borrow a consequence from the mere name of surgeon or doctor, we hope to be able to assert our consequence by our utility. Of whom consist the great bulk of the members of the College of Surgeons, but of general practitioners? Who give to the College its wealth and consequence? If the general practitioner would withdraw himself altogether from other corporations or colleges, and could establish one of his own, from his own superiority in numbers and in power, the other branches would soon sink into insignificance, and then it would be seen from whom "the rays" of power and consequence are borrowed. The title of general practitioner does not, I humbly assert, degrade us. A man may degrade a title, but the title cannot degrade the man. Our society (to which general practitioners, or those who practise all branches of the profession, alone are eligible as members) will act, not in a spirit of hostility or enmity to other branches of the profession, but in a spirit of honest rivalry, showing, by every

means in our power, our claims to the superior confidence of the public, and our honest determination to allow of no superiority. I contend again that the title of general practitioner is no degradation, but an honour; it is superior to that of either surgeon or physician, inasmuch as it denotes his more general capacity and usefulness. He is their equal upon their own separate grounds, and upon all other grounds he is their superior.

A correspondent of yours, in noticing our Society, has considered that it can "serve only to gratify the appetite for notoriety possessed by its managers;" and then, in another place, he says, "The Committee of the Association may be men every way eligible, but until we know who they are, they are not entitled to our alliance." He accuses us, first, of an appetite for notoriety, and then condemns us for not making ourselves publicly known. Your correspondent states, that "some such association is greatly needed;" and when the association is formed, he condemns it, because, as I suppose, he has not been consulted. A society is now formed, which, it is confessed, is "greatly needed." If the society is incomplete and imperfect, which must be the case with all infant societies, let the different members of our profession come forward and join us, and endeavour to render perfect and complete that which we have begun. We are open to conviction and improvement, and the best way will be for those who disapprove of any part of our plan to join us, and by their influence and intelligence add to our respectability, and conduce to our perfection. The views of every one cannot all at once be suited. Time alone can bring it to bear, but the wisest course will be not to crush, but to endeavour to improve the present Society. I have only to say in conclusion, that the prospects of the Society are at present very favourable. Rooms have been engaged at No. 4, Regent Street, and some valuable presents of books, have already been made to it. Trusting to your candour and impartial feeling for an early insertion of the above,

I remain, Sir,
Your most obedient servant,
ONE OF THE COMMITTEE.

July 19th, 1830.

A NON-MEDICAL CORONER'S INQUEST ON SHEEP BONES.

To the Editor of THE LANCET.

SIR,—While some repairs were making at the old Rectory House at Stockleigh English, Devon, on the 2d of July, there were found buried among some loose earth in the kitchen some sheep's bones and an ox's rib; these were supposed by the ignorant workmen to be human bones. The news soon spread among the neighbouring farmers, and it was rumoured that a girl was suddenly missed from this house about twenty years since. Information was given to the coroner, —— Partridge, Esq., attorney, residing at Tiverton, who immediately summoned a jury, and although the medical witness swore that there was not one human bone found, an old man, who had lived in the house (whose daughter had left some years since to enter service up the country), was strictly examined on suspicion of murder, and the jury sat nine hours investigating this mysterious affair, and deliberating on a verdict!

You have often, Sir, endeavoured to convince your readers of the inefficacy of non-medical coroners. I send this statement, thinking it goes far to prove your assertions, for no medical man could have summoned a jury, or have wounded the feelings of a poor man, on such a ridiculous pretence.

I am, Sir,
Your very obedient servant,
VERITAS.

MEDICAL ASSISTANTS.

To the Editor of THE LANCET.

SIR,—On various occasions I have noticed your anxious endeavours to promote the interests and ameliorate the state of the medical profession, and I may say with truth, your efforts have not been fruitless; one class, however, remains in *statu quo*, I mean that of medical assistants, and to this I beg leave to invite your attention. You must understand, Sir, that I am a little experienced on this subject, and that I have witnessed, in *propria persona*, the degradation of the order alluded to. Although I have had the advantage of a sound medical and chirurgical education, by studying years at London and Edinburgh, and am well grounded in classical and general literature, and the son of a deceased most respectable beneficed clergyman, consequently have been used to polished society; still I am doomed to find these of no account in procuring me a respectable assistantship, but rather a bar to it; and I do firmly believe, that no other profession affords an instance of a well-principled and well-educated member suffering a state of indigence, because he is deemed too respectable to be engaged by a principal. I have certainly had two or three engagements, but in one it was expected that I should light the hall lamp, and take upon me such kind of duties as fall more properly to menials; in another, to take medicines out with me in my pocket,

and this as a general rule, walking or riding, whether the patient lived near or at a distance; in short, Sir, I find myself, at above thirty years of age (a season of activity and intelligence,) and devotedly attached as I am to the science of medicine, compelled to earn my bread by teaching the classics, and not capable of supporting myself by my profession, the members of which seem startled at any thing in the shape of respectability of attainments and personal merit.

I am, Sir, your obedient servant,

A MEMBER OF THE COLLEGE OF SURGEONS.

12, Arundel Street, July 13th, 1830.

HOPITAL DES ENFANS MALADES.

CASE OF SPONTANEOUS GANGRENE IN A CHILD.

B., a weakly child, three years and a half old, was admitted on the 16th of July, 1827, in order to undergo the amputation of the right leg, on account of spontaneous gangrene. From the statement of the practitioners by whom it had been attended, it appeared, that on the 19th of June the child had been seized with convulsions, which were followed by a comatose state, from which it was with difficulty roused. The skin was hot and dry; there had been no diarrhœa, nor vomiting; and the abdomen, though rather hard and tense, was not tender on pressure. Under the repeated application of leeches and cold water to the head, and of emollient glysters, the cerebral symptoms subsided, and on the seventh day of the disease, the child appeared to be in a state of recovery. On the 28th of June, however, without any obvious cause, it began to complain of violent pain in the right foot, which, on examination, was found to be cold, the skin being of a dirty-white colour, and the nails yellow. The foot was rubbed with a balsamic liniment, and the whole limb afterwards wrapt up in a warm flannel. On the following day the pain continued the same, nor had the temperature of the foot undergone any change; a mustard poultice was therefore applied, and by this, on the morning of the 30th, the temperature was found to be a little increased, but without any alleviation of the pain; the foot at the same time began to swell, but there was no further discoloration of the skin. On the 5th of July the foot was much swelled, the skin of a livid colour, and phlyctænæ had disappeared on the dorsum and the toes; the pain had not remitted, but was more of an intermittent character, and seemed to be most violent at the extremities of the toes. The foot was now covered with compresses dipped in a decoction of bark with spirit of camphor. The fever was but slight, and the appetite not impaired; a small quantity of Bordeaux wine was given, and the decoction of cinchona replaced by solution of the chloride of soda. On the day of the child's admission, mortification had extended almost over the whole limb; the epidermis was detached, and the soft parts, which were converted into a dark mass, and infiltrated with a reddish fluid, exhaled an extremely offensive smell. At the internal and posterior surface, two-thirds of the leg were gangrenous. At the outer side of the limb, mortification had ascended much higher, almost to half an inch below the head of the fibula; at the back part of the leg, a pretty distinct line of demarcation had formed; at the anterior part, however, there seemed to exist no tendency towards it. The pulse was frequent, and rather strong; respiration quick and unequal; skin hot and moist; the digestive functions undisturbed. The child was ordered beef-tea, and the limb was covered by compresses, with spirit of camphor. On the 17th it had passed a restless night. At the interior surface of the limb, the gangrenous parts were distinctly separated from the living, and the furrow between them was filled with healthy pus; externally, the mortification had not extended; the soft parts above it were slightly inflamed. On the 10th, the mortification being limited on all points, it was decided to perform amputation below the knee. It is worthy of remark, that on applying the tourniquet, the crural artery could not be felt; in other respects the operation afforded nothing of interest; two flaps were formed, one externally, the other internally. The hæmorrhage was very slight, and appeared to proceed entirely from the subcutaneous vessels; the popliteal artery did not emit any blood, even after the removal of the tourniquet, and no ligature was required. The child being replaced in its bed, the wound was dressed an hour and a half after the operation, when there was a slight reaction; but no hæmorrhage had taken place. On dissection of the limb, two abscesses were found between the parts which had not been completely destroyed by gangrene; the one between the tibialus anticus and the extensor digitorum communis, the other under the soleus muscle. Amputation had been performed three lines above these abscesses. The popliteal vein contained a coagulum of about ten lines length; the artery was completely empty; the tibial nerve appeared healthy; the gangrenous parts were so completely destroyed, that nothing could be distinguished in them.

On the 19th, 20th, and 21st, the child continued in the same state, slept little, was

rather agitated, and frequently screamed from pain. During these three days the attention of the surgeons was directed to the left leg, which was cold and extremely tender, and exhibited all the signs of approaching gangrene; the pulsations of the femoral artery could not be felt. On the 23d, the stump and the left leg seemed to be very painful, and the skin of the left foot and leg became gangrenous and covered with phlyctænæ; the child was extremely agitated, &c. On the 24th, the pain seemed to have still increased; at the same time there was a great prostration of strength; respiration became stertorious, and it died during the night.

On examination of the body, the heart was found healthy, but, as well as the aorta, as far as the origin of the second lumbar artery, empty; from this point, however, about an inch of the aorta, the iliac, hypogastric, femoral, and external iliac arteries, and their branches, contained a coagulum of blood, which so entirely filled them as to make several practitioners, to whom the preparations are shown, believe the vessels to be injected; the right popliteal artery did not contain any coagulum, but the left femoral and popliteal artery did. In none of the vessels the coagulum adhered to the parietes, except at the bifurcation of the aorta, where it also was more firm than any where else; it seemed as if the coagulation of the blood had commenced from this point. The parietes of the arteries appeared to be perfectly healthy, and without any trace of inflammation. The veins were completely empty, with the exception of the right popliteal, as was stated above. The intestinal canal, liver, and mesenteric gland, were perfectly healthy, but the spleen had undergone a very remarkable alteration; it contained a very large abscess, the parietes of which were formed by the stomach, the peritoneum, and the substance of the spleen; besides this another abscess was found in it, and which had no communication with the former. The thoracic viscera were healthy; the part of the diaphragm only, corresponding to the spleen, was inflamed. The brain and spinal marrow were healthy.—*Journ. Hebdomadaire.*

HOTEL-DIEU.

LITHOTRITY.

A CHILD, five years of age, having been admitted with symptoms of stone in the bladder, was repeatedly examined by MM. Breschet and Sanson, who distinctly felt the stone, with this peculiarity, that M. Breschet felt it always on the right, and M. Sanson on the left side. The child was brought into the amphitheatre, but the stone could not be found. A few days afterwards the little patient was again carried into the amphitheatre; the stone was distinctly felt, and MM. Dupuytren and Breschet alternately introduced the "lithotriteur," but without any effect. On the 2d of July, a third attempt was made; M. Dupuytren felt the stone, but, an injection having been made into the bladder, could not seize it with the "pince." M. Leroy was now called upon by M. Dupuytren, to try his skill; the stone was directly seized and crushed into pieces; it was rather small, and consisted of the oxalate of lime.—*Lanc. Franç.*

TO CORRESPONDENTS.

COMMUNICATIONS have been received from One of the Subordinates—J'aime le vrai mot—Fairplay—A Pupil of the University—Mr. S. Gower—Mr. J. L. L.—Mr. W. Browne—An Inquirer—Mr. Haydon—A Former Correspondent—Celsus—Lieut. M. Thackeray—A. O.—Mr. W. Potter.—A Governor of the Taunton and Somerset Hospital—Mr. Handey—Mr. F. Cherry—Corrigens—A Perpetual Pupil at Windmill Street—Sayings and Doings—Mr. Thos. Gordon Hake, &c. &c.

Mr. S. The notice was written before the note of Mr. S. was received, but in pursuance with the custom which, we hope, has been strictly impartial with us, the request could not have been complied with, had it been received at an earlier period. We will with pleasure attend to any communication we may receive from him.

The reply to the charges against Mr. Eisdell, which we published last week, were erroneously mentioned on the wrapper as the production of that gentleman. Our correspondent was Dr. Alexander Thomson, who has since informed us that the Council, in a letter to Mr. Eisdell, has expressed their regret that the animadversions in question should have been made.

A ZOOLOGICAL SOCIETY has been established in DUBLIN, apparently upon very liberal principles. It is supported by many noblemen, also by Mr. Crampton the surgeon-general, Dr. Stokes, and several other gentlemen of professional eminence.